QUARTERLY SAMPLING REPORT
SEPTEMBER 1988
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CALIFORNIA

PROJECT 50-1014-03

PREPARED FOR

SOUTHERN CALIFORNIA CHEMICAL
8851 DICE ROAD
SANTA FE SPRINGS, CALIFORNIA

PREPARED BY

KLEINFELDER
17100 PIONEER BOULEVARD, SUITE 350
ARTESIA, CALIFORNIA 90701

December 1988

DL1

KLEINFELDER

December 5, 1988

Project 50-1014-03

Mr. Hank Yacoub
California Regional Water Quality Control Board
Los Angeles Region
107 South Broadway, Room 4027
Los Angeles, California 90012-4596

QUARTERLY SAMPLING REPORT
SEPTEMBER 1988
SOUTHERN CALIFORNIA CHEMICAL
8851 Dice Road
Santa Fe Springs, California

Dear Mr. Yacoub:

Attached to this letter is the quarterly sampling report for Southern California Chemical, Santa Fe Springs facility. The report includes the results of analyses of water samples and water level measurements obtained on September 21, 22, 23, and 26, 1988, from the on-site monitoring wells.

We trust the information in the report meets your needs at this time. Should you have any questions, please feel free to contact us at your convenience.

Very truly yours,

KLEINFELDER, INC.

Linda J. Baker
Staff Geologist

Kenneth L. Durand
Project Hydrogeologist

John F. Ficke, P.E.
Engineering Manager

LB:vj

cc: Bud Torrance
John Leo
Jim Breitlow

TABLE OF CONTENTS

LIST OF TABLES

TABLE OF CONTENTS
(Continued)

LIST OF FIGURES

LIST OF APPENDICES

QUARTERLY SAMPLING REPORT
SEPTEMBER 1988
SOUTHERN CALIFORNIA CHEMICAL
8851 Dice Road
Santa Fe Springs, California

INTRODUCTION

In order to monitor the groundwater quality at Southern California Chemical (SCC), Santa Fe Springs facility (Figure 1), a program of quarterly groundwater sampling has been implemented. This report summarizes the tenth sampling and analyses period in the officially established quarterly sampling program. The scope of work conducted was in accordance with that requested by SCC for the quarterly sampling program. This report contains the results of analyses of water samples and water level measurements obtained during September 21, 22, 23, and 26, 1988, from SCC groundwater monitoring wells. Included for comparison are the analytical results of our previous water samplings.

Groundwater sampling at the subject site began in February 1985 to assess and aid in the mitigation of a chromium and cadmium plume located in the vicinity of monitoring well MW-4 (see Figure 2). Subsequently, a quarterly groundwater sampling program was initiated in March of 1986. The purpose of the quarterly sampling program is to monitor groundwater quality and establish a database of the chemicals in the groundwater beneath the site. The most important aspects of this program are (a) the assessment of the location and concentrations of the chromium and cadmium plume (b) the detection and evaluation of water-quality changes and (c) the characterization of background water quality.

This report includes the data obtained from the September 1988 sampling, as well as all previous sampling data. The original laboratory reports and chain-of-custody records of the September 1988 sampling run are included in the appendices. The eleventh quarterly sampling is scheduled for December 1988, to be followed by a report to the Regional Water Quality Control Board by January 1989.

MONITORING WELL SAMPLING

Sampling was performed by a Kleinfelder environmental technician using the Sampling Protocol as outlined in Southern California Chemical Quality Assurance Project Plan (QAPP) dated May 1988.

Twelve monitoring wells were sampled as part of this program. Eleven of the twelve wells sample groundwater from the uppermost portion of the first aquifer beneath the site. Well MW-4A is perforated in the lowest portion of the same aquifer.

As outlined in the QAPP, U.S. EPA indicator measurements (pH, specific conductance, TOX, TOC) and organic compound concentrations from specified wells (MW-1, MW-2, MW-4A, MW-5, MW-6, MW-7) are measured only on a semiannual basis. These analyses are conducted during the June and December quarterly sampling programs. They are not measured as part of the September or March quarterly samplings, and no statistical analyses of groundwater data are completed during these quarters.

As is customary, the Regional Water Quality Control Board was notified prior to sampling and was provided the opportunity to observe sampling and to collect duplicate or split samples.

LABORATORY TESTING

Analytical testing was performed by CRL Environmental - South Coast (Enseco) (CRL) of Garden Grove, California. Quality assurance testing was provided by Brown and Caldwell Laboratories (B&C) of Pasadena, California. A detailed discussion of both laboratories' internal quality assurance/quality control is included in the QAPP.

Laboratory testing for the September 1988 quarterly sampling consisted of analyzing of approximately 100 water samples. The primary laboratory, CRL, analyzed 60 monitoring well samples, 10 quality control samples, and 3 spiked samples. The quality assurance laboratory, B&C, analyzed 21 split monitoring well samples, and 3 spiked samples. Spiked samples were provided by Analytical Technologies, Inc. (ATI) of San Diego, California.

The results of the testing are summarized in Tables 1 - 12. Individual test results are included in Appendix A and chain-of-custody records are included in Appendix B.

QUALITY CONTROL

To monitor the validity of the chemical data, the following quality assurance measures were employed. Quality control procedures are discussed in more detail in the QAPP.

DUPLICATE SAMPLES

Duplicate samples were taken at each well to ensure a backup sample in the event of breakage or trouble with the testing equipment. This duplication also allows for a recheck on results if there is an inconsistency or if confirmation of results becomes necessary.

SPLIT SAMPLE TESTING

Split samples were collected and analyzed on three of the twelve monitoring wells. Monitoring wells MW-4, MW-10, and MW-11 were analyzed by both laboratories. Table 13 contains the results of split sample testing. There is general agreement between laboratories. In the sample from MW-11, however, CRL detected methylene chloride at a concentration of 16 micrograms per liter (μg/l), whereas B&C did not detect methylene chloride at 1 μg/l. Methylene chloride is commonly used in the laboratory during the analysis process, and its presence in the CRL sample is attributed to laboratory contamination.

CROSS-CONTAMINATION TESTING

Quality control (QC) samples were collected to verify that cross-contamination between wells was not occurring during sampling. By the protocol described in the QAPP, samples of distilled water were collected prior to sampling the first well, and again between sampling selected subsequent wells. The sequence of sampling and the analytical results from the quality control samples are shown in Table 14. The compounds with elevated concentrations in the monitoring wells (ethylbenzene, trichloroethylene, 1,1-dichloroethane, etc.) were not detected at 1.0 μg/l in the quality control samples. This nondetection indicates that cross-contamination did not occur by the sampling system.

SPIKED SAMPLE TESTING

Analytical Technologies, Inc. (ATI) of San Diego, California, supplied a set of spiked samples. The spiking solution is traceable the National Bureau of Standards. Spiking compounds and their calculated concentrations are listed in Table 15. Spiked samples were analyzed by ATI, B&C, and CRL. Detected concentrations and percent recovery are included on Table 15. Percent recoveries of chromium, copper and zinc are similar for all wells, ranging from 70 to 100%. Percent recoveries of organic compounds range between 62 and 154% for ATI, 65 and 91% for B&C, and 94 to 162% for CRL. The percent recoveries are generally between 70 to 137%, indicating an acceptable degree of accuracy.

SAMPLE CONTROL

All samples were labeled during sampling, and custody seals were placed across the lids. Samples were transported under chain-of-custody to the laboratory in sealed ice chests. Copies of the chain-of-custody records are included in Appendix B.

GROUNDWATER LEVELS

Depth to groundwater was measured prior to sampling each monitoring well. The September 1988 measurements and all prior measurements are listed in Table 16. The groundwater surface declined beneath the facility since the previous quarter. The water level decrease ranged from 1.78 to 2.93 feet. Figure 3 illustrates the direction of groundwater flow beneath the study site.

GROUNDWATER QUALITY

ORGANIC COMPOUNDS

Organic chemicals have not been used on-site by Southern California Chemical Company during production processes. However, a number of organic compounds exist in the groundwater beneath the site. Large increases in the organic chemical concentrations in monitoring well MW-3 occurred in the February 1988 sampling. Ethylbenzene increased from 290 μg/l to 8500 μg/l; toluene increased from not detected at 0.5 μg/l to 8,500 μg/l, and total xylene increased from not detected at 0.5 μg/l to 23,000 μg/l.

Concentrations have decreased during the June and September quarterly samplings. In the September sampling, ethylbenzene decreased to 1000 μg/l, and total xylenes decreased to 200 μg/l. The ethylbenzene, toluene, and total xylenes concentrations are shown in Figures 4 and 5.

Monitoring well MW-3 is an upgradient well located along the northern property boundary of the site. As these data indicate, and as discussed in previous reports, the suspected source for the organic chemicals is a neighboring facility.

SITE-SPECIFIC INDICATOR CHEMICALS

Hexavalent Chromium

Hexavalent chromium exists at elevated concentrations in monitoring well MW-4. Hexavalent chromium concentrations were originally detected in MW-4 at 500 milligrams per liter (mg/l) in June 1985. Subsequently, concentrations have fluctuated between 61 mg/l and 550 mg/l. As of September 1988, hexavalent chromium existed at 170 mg/l in MW-4.

Elevated concentrations of hexavalent chromium also exist in MW-9. Hexavalent chromium was first detected in MW-9 at 0.05 mg/l in June 1987, and increased to 1.5 mg/l in September 1988. Hexavalent chromium was below the detection limit of 0.05 mg/l in the remaining on-site wells during the September 1988 sampling period.

Total Chromium

Historically, total chromium has been present at elevated concentrations in MW-4 and MW-9. During the September 1988 sampling, total chromium was detected at 180 mg/l in MW-4 and 2.75 mg/l in MW-9. In the remaining wells, total chromium was detected at concentrations between 0.04 and 0.07 mg/l.

As discussed in previous quarterly sampling reports (February 1988, June 1988), the post-February 1988 increase in total chromium concentrations is attributed to a change in sample preparation, and not a change in groundwater quality. EPA method 3010 (described in EPA document SW 846) is the methodology used to prepare water samples to be analyzed for total metals. Method 3010 requires that the sample be "well mixed" prior to removal of the sample from the collection bottle. This mixing of the sample suspends the fine sediment (suspended sediment) that was collected during sampling.

B&C, the primary laboratory prior to February 1988, was using a modification of EPA Method 3010 for sample preparation in which the sample was not mixed prior to analysis. This modification of method 3010 was suggested as the "common sense" approach by personnel of the Department of Health Services, Southern California Laboratory. CRL, the current primary laboratory, used method 3010 exactly as stated in the SW 846 document. Hence, mixing of the sample yielded total chromium concentrations which include the suspended sediments.

Field filtering of samples was initiated in May 1988 to reduce the chromium concentrations associated with sediment in the samples. However, filtering apparently does not totally eliminate the increase in chromium concentration. The results of the September 1988 quarterly sampling are thought to represent variations associated with sample filtering and preparation methods, and not an increase in chromium concentrations across the site.

LIMITATIONS

This report is based on:

1. The observations of our field personnel
2. The results of laboratory tests performed by CRL, B&C, and ATI.
3. Measurements of groundwater elevations in the 12 monitoring wells

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in the groundwater conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

Services performed by Kleinfelder have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the Los Angeles County area. No other warranty, expressed or implied, is made.

Respectfully submitted,

KLEINFELDER, INC.

Linda J. Baker
Staff Geologist

Kenneth L. Durand
Project Hydrogeologist

John F. Ficke, P.E.
Engineering Manager

LB:KLD:JFF:vgj

TABLE 1
WATER-QUALITY DATA
MONITORING WELL #1
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.1		7.2	7.0	7.38	6.8	7.0	6.9	7.1		7.05	
TOC (mg/l)	3.7		19		35	21	ND 3	ND 3	13	32	10		8.5	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.1		0.038	
Sp. Cond. (umhos/cm)	2300		3400		1650	3600	3200	2800	3400	3800	2975		2500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.08	ND.02	0.03	0.07
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.02	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.01	ND.04	ND.04	ND.02	0.10	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		0.18		0.04	ND.08	0.018	ND.03	0.06	ND.03	0.04		0.07	0.08
Chloride (mg/l)	330		300		650	920	700	570	720	770	430		460	630
Nitrate as N (mg/l)	7.0		3.7		0.5	1.3	4.06	5.3	ND.1	2.3	4.5		5.2	2.9
Nitrate as NO_3 (mg/l)	31		17		18	11	18	23	ND.4	11	19		23	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
1,1-Dichloroethylene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
1,2-Dichloroethane (ug/l)		ND1		ND1	2	1	0.5	1	1	ND1		ND1		
Benzene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7		
Carbon Tetrachloride (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Chloroform (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Ethylbenzene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Trichloroethylene (ug/l)		16		16	18	18	9	11	2.4	4		15		
Toluene (ug/l)		ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1		
Xylene (ug/l)		ND1		ND1	ND1		ND.5	ND.5	ND.5	ND1		ND1		
Methylene Chloride (ug/l)		ND1		ND1	ND1	ND1	ND2	ND.5	1.7	ND1		ND1		

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 2
WATER-QUALITY DATA
MONITORING WELL #2
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.0		7.4		7.7	7.4	7.68	7.1	7.1	7.12	7.27		7.35	
TOC (mg/l)	34		4.8		ND3	ND3	ND3	ND3	ND3	ND3	ND1		ND1	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.04		0.032	
Sp. Cond. (umhos/cm)	2300		1900		1800	2100	2280	1900	3400	1500	1550		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.05	ND.02	ND.02	0.06
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.03		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.03	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		ND.03		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	0.03		ND.02	0.03
Chloride (mg/l)	270		180		220	410	510	250	700	180	110		160	160
Nitrate as N (mg/l)	2.1		5.8		5.4	5.0	6.25	7.2	8.8	7.2	7.2		7.2	7.1
Nitrate as NO_3 (mg/l)	9.1		26		24	22	27.7	32	39	32	32		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		4	3		ND1	5	9	21	20	2.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)		3	ND1		ND1	3	5	0.9	11	0.94	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1	ND1		3	1	ND1	ND.5	2.2	ND.5	ND1		ND1	
Benzene (ug/l)		ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1	ND1		ND1	2	2	1	ND.5	0.73	ND1		ND1	
Ethylbenzene (ug/l)		ND1	ND1		3	2	ND1	ND.5	6.2	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		21	22		12	38	67	20	93	40	5		23	
Toluene (ug/l)		ND1	ND1		3	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Xylene (ug/l)		ND1	ND1		2	ND1		ND.5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1	ND1		ND1	ND1	ND1	ND2	ND.5	11	ND1		ND1	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 3
WATER-QUALITY DATA
MONITORING WELL #3
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.4		7.0		7.2	7.2	7.55	6.9	7.0	5.9	6.78		7.10	
TOC (mg/l)	16		190		44	29	31	20.5	21	50	135		81	
TOX (mg/l)	0.17		ND.08		.18	.17	.21	.22	.15	.27	.10		0.24	
Sp. Cond. (umhos/cm)	1700		1500		2200	2200	2400	2300	2200	3300	1575		2100	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	ND.02	ND.02	0.07
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002	ND.011	ND .009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		0.02	0.02
Zinc (mg/l)	ND.019		0.26		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	ND.02		0.04	0.02
Chloride (mg/l)	170		76		400	520	550	420	380	740	190		350	840
Nitrate as N (mg/l)	3.0		ND 1		6.5	4.1	4.81	3.4	3.8	5.2	ND.2		2.7	4.8
Nitrate as NO_3 (mg/l)	13		ND4.4		29	18	21.3	15	17	23	ND1		12	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)	6		ND50	5	4	5	5	4	1.6	6.9	ND10		ND50	ND25
1,1-Dichloroethylene (ug/l)	14		ND50	11	7	13	17	7.8	3.9	15	ND10		ND50	ND25
1,2-Dichloroethane (ug/l)	ND1		ND50	9	6	7	11	18	2.11	ND.5	36		ND50	ND25
Benzene (ug/l)	9		ND50	3	ND1	3	2	ND.5	ND.5	ND.5	ND10		ND35	ND17
Carbon Tetrachloride (ug/l)	73		ND50	78	110	58	87	50	73	87	ND10		ND50	ND25
Chloroform (ug/l)	46		ND50	36	97	33	45	20	22	ND.5	ND10		ND50	ND25
Ethylbenzene (ug/l)	ND1		95000	1100	ND1	310	4	ND.5	ND.5	290	8500		1700	1000
Trichloroethylene (ug/l)	320		ND50	160	170	200	160	98	70	150	14		150	150
Toluene (ug/l)	2		15000	11	ND1	ND1	ND1	ND.5	ND.5	ND.5	8500		550	ND25
Xylene (ug/l)	ND1		20000	2000	ND1	10		ND.5	ND.5	ND.5	23000		850	200
Methylene Chloride (ug/l)	ND1		ND50	ND1	ND1	2	ND1	ND2	ND2	9.6	ND10		ND50	100

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 4
WATER-QUALITY DATA
MONITORING WELL #4
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	6.3		7.1		7.1	6.6	7.4	6.7	6.3	6.3	6.6		6.55	
TOC (mg/l)	36		26		110	79	98	26.5	133	90	46		57	
TOX (mg/l)	ND .05		.26		.19	2.3	1.40	.68	2.10	1.3	.36		0.73	
Sp. Cond. (umhos/cm)	6400		3600		3500	4250	4950	4000	11000	7300	4625		5900	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	500	550	61		120	180	170	98	440	190	140	238	218	180
Chromium (HEX) (mg/l)	500	500			120	180	170	100	430	232	140		84	170
Cadmium (mg/l)	0.78	0.92	0.035		0.04	0.09	0.07	0.05	ND .01	.33	.06		0.13	0.12
Copper (mg/l)	ND .08		ND .02		ND .02	ND .04	ND .03	ND .02	ND .02	ND .02	ND .03		0.04	ND.02
Zinc (mg/l)	0.06		ND .03		ND .04	ND .08	ND .007	ND .03	ND .03	ND .03	ND .03		0.15	ND.02
Chloride (mg/l)	2300		1100		770	1300	1400	960	3500	1800	790		1600	1400
Nitrate as N (mg/l)	18	12	ND 13		0.5	1.3	1.1	ND .1	ND .7	1.3	.2		0.75	3.9
Nitrate as NO_3 (mg/l)	81	55	ND 55		2.4	5.6	5.0	ND .4	ND 3	5.8	1.1		3.3	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	100	100	42	57	61	120	27	110	120	70		130	100
1,1-Dichloroethylene (ug/l)	100	42	34	41	61	67	20	94	110	56		60	50
1,2-Dichloroethane (ug/l)	ND 50	17	34	61	12	140	74	74	100	35		90	70
Benzene (ug/l)	ND 50	16	9	ND 1	ND 10	5	ND 5	ND 5	ND .5	ND 14		20	ND.7
Carbon Tetrachloride (ug/l)	ND 50	ND 1	ND 1	ND 1	ND 10	ND 1	ND 5	ND 5	1.5	ND 20		ND 10	ND10
Chloroform (ug/l)	ND 50	7	3	8	10	12	6.2	30	23	ND 20		23	ND10
Ethylbenzene (ug/l)	3000	36	50	1100	670	220	160	1500	380	70		40	ND10
Trichloroethylene (ug/l)	550	140	170	200	280	290	180	280	190	110		250	250
Toluene (ug/l)	8300	130	25	330	260	220	240	3700	580	180		90	ND10
Xylene (ug/l)	10000	100	30	300	300	300	731	2700	570	200		120	40
Methylene Chloride (ug/l)	100	12	ND 1	17	ND 10	ND 1	27	140	110	ND 20		110	70

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 5
WATER-QUALITY DATA
MONITORING WELL #4A
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.8	7.5		7.6	7.5	7.7		7.7	7.2	7.3		7.45	
TOC (mg/l)		40	8.3		ND3	ND3	ND3		ND3	ND3	ND1		ND1	
TOX (mg/l)		ND.05	ND.08		ND.08	ND.08	ND.08		.14	ND.03	ND.01		0.15	
Sp. Cond. (umhos/cm)		1500	1500		850	1400	1525		1600	1700	1662		1550	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03		ND.04	ND.04	.03	.02	ND.02	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02		ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.01		ND.01	ND.01	ND.01		ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03		ND.02	ND.02	ND.02		0.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007		ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)			100		110	120	130		160	129	97		100	160
Nitrate as N (mg/l)		4.5	7.5		6.1	4.7	6.3		5.4	6.1	3.8		6.1	6.3
Nitrate as NO_3 (mg/l)		20	33		27	21	28		24	27	17		27	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			13		11	3	19		140	1.2	ND1		ND10	
1,1-Dichloroethylene (ug/1)			1		2	ND1	2		50	ND.5	ND1		ND10	
1,2-Dichloroethane(ug/l)			ND1		ND1	ND1	2		1.5	ND.5	ND1		ND10	
Benzene (ug/l)			8		ND1	ND1	ND1		ND.5	ND.5	ND.7		ND7	
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Chloroform (ug/l)			ND1		ND1	ND1	2		17	ND.5	ND1		ND10	
Ethylbenzene (ug/l)			ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Trichloroethylene (ug/l)			8		7	3	12		82	3.2	ND1		ND20	
Toluene (ug/l)			ND1		ND1	ND1	ND1		1.5	ND.5	ND1		ND10	
Xylene (ug/l)			ND1		ND1	ND1			ND.5	ND.5	ND1		ND10	
Methylene Chloride (ug/l)			ND1		ND1	ND1	ND1		11	ND.5	ND1		100	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 6
WATER-QUALITY DATA
MONITORING WELL #5
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.4		7.3	7.3	7.82	6.9	7.0	7.6	7.06		7.10	
TOC (mg/l)	ND3		4.8		5	3	ND3	ND3	ND3	5	7		21	
TOX (mg/l)	.19		.16		.65	.18	.30	.45	.36	ND.03	.3		0.13	
Sp. Cond. (umhos/cm)	1700		1200		1400	1100	1220	1400	1400	1300	1537		1400	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.1	ND.02	0.05	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.019		0.18		ND.04	ND.08	ND.001	ND.031	ND.03	ND.03	.4		ND.02	ND.02
Chloride (mg/l)	2.0		66		79	290	143.5	110	110	100	90		91	93
Nitrate as N (mg/l)	0.42		8.8		12	8.6	11.13	10	15	3.4	5		14	3.6
Nitrate as NO_3 (mg/l)	1.9		39		55	38	49.3	45	65	24	22		3.1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)											
1,1-Dichloroethane (ug/l)	ND1	ND 1	2	2	7	4	5.4	.29	ND1		ND1
1,1-Dichloroethylene (ug/l)	ND1	ND1	3	3	4	2.7	5.2	.25	ND1		ND1
1,2-Dichloroethane (ug/l)	ND1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.3	ND1		7
Benzene (ug/l)	5	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7
Carbon Tetrachloride (ug/l)	3	11	45.5	37	68	100	120	99	20		26
Chloroform (ug/l)	2	10	14.5	16	43	48	50	95	10		18
Ethylbenzene (ug/l)	ND1	ND1	ND1	6	ND1	ND.5	ND.5	ND.5	ND1		ND1
Trichloroethylene (ug/l)	10	24	64	36	70	70	59	26	5		18
Toluene (ug/l)	1	ND1	ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1
Xylene (ug/l)	ND1	ND1	ND1	ND1		ND.5	7.3	ND.5	ND1		ND1
Methylene Chloride (ug/l)	ND1	ND1	ND1	ND1	ND1	ND2	ND.5	4.3	ND1		ND1

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 7
WATER-QUALITY DATA
MONITORING WELL #6B
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.6		7.4		7.5	7.8	7.6	7.1	7.4	7.1	7.13		7.10	
TOC (mg/l)	ND3		6.5		ND3	ND3	ND3	ND3	ND3	9	ND1		ND1	
TOX (mg/l)	0.1		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.03	.02		ND.01	
Sp. Cond. (umhos/cm)	1400		1300		1400	1200	1425	1400	1600	1400	1265		1300	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	0.0038		ND.03		ND .03	ND.02	ND.03	ND.04	ND.04	ND.04	.02	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.03		ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		.02	ND.02
Chloride (mg/l)	79		220		82	100	140	92	130	94	61		89	100
Nitrate as N (mg/l)	6.9		8.8		7.0	5.2	6.1	7	8.4	8.4	8.4		7.3	8.0
Nitrate as NO_3 (mg/l)	28		39		31	23	27	31	37	37	37		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	1.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)			30		19	23.5	24	21	20	33	22		21	
Toluene (ug/l)			ND1		ND1	ND1	ND1	ND.5	0.8	ND.5	ND1		ND1	
Xylene (ug/l)			ND1		ND1	ND1		ND.5	7.9	ND.5	ND1		ND1	
Methylene Chloride (ug/l)			ND1		ND1	ND1	ND1	ND.5	2.6	1.2	ND1		ND1	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 8
WATER-QUALITY DATA
MONITORING WELL #7
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED											
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.3	7.3		7.4	7.2	7.3	6.5	6.8	7.3	8.94		6.95	
TOC (mg/l)		260	6.5		5	17	ND3	43	7	5	2		4.9	
TOX (mg/l)		0.081	ND.08		ND.08	ND.08	ND.08	ND.08	.11	ND.03	.08		0.18	
Sp. Cond. (umhos/cm)		2700	1700		1900	5600	5850	3700	3300	5000	8500		2800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.02	ND.02	0.07	0.04
Chromium (HEX) (mg/l)		ND.5	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	0.08	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.04	0.022	ND.03	0.04	ND.03	ND.02		ND.02	ND.02
Chloride (mg/l)		380	190		280	1800	1700	630	610	1200	1900		570	1400
Nitrate as N (mg/l)		27	5.0		4.3	2.7	4.4	19	25	1.1	ND0.2		ND.2	5.5
Nitrate as NO_3 (mg/l)		120	22		19	12	19.5	82	110	19	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		2			8	42	30	7.1	14	6	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1			2	5	6	ND5	6	.55	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1			ND1	2	ND1	ND5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)		64			ND1	ND1	ND1	ND5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1			ND1	ND1	ND1	8.2	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1			4	ND1	ND1	1.0	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		29			67	71	70	180	130	35	24		100	
Toluene (ug/l)		2			5	ND1	ND1	2.2	3.6	ND.5	ND1		ND1	
Xylene (ug/l)		ND1			4	ND1		ND5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	1.1	ND1		ND1	

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 9
WATER-QUALITY DATA
MONITORING WELL #8
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.5		7.4	7.4	7.4	6.9	7.1	7.1	7.23		7.25	
TOC (mg/l)		99	7		8	ND3	ND3	ND3	5	ND3	ND1		1.5	
TOX (mg/l)		0.44	.09		ND.08	.10	.15	ND.08	.19	ND.08	.04		.06	
Sp. Cond. (umhos/cm)		2800	1500		1700	1600	1800	2000	2100	1300	1550		1,600	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.05	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.03	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		0.05	0.04
Chloride (mg/l)			530		170	270	250	300	300	120	140		190	130
Nitrate as N (mg/l)		1.3	4.2		3.2	2.7	3.2	2.5	2.2	4.3	4.5		3.7	5.7
Nitrate as NO_3 (mg/l)		5.8	39		14	12	14.1	11	10	19	20		16	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			41		76	160	160	55	160	45	50		42	2
1,1-Dichloroethylene (ug/l)			3		8	17	19	5.6	29	5.5	2.8		6	ND1
1,2-Dichloroethana (ug/l)			1		14	14	8	9.5	16	ND.5	ND1		3	30
Benzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	ND.7
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	8	ND.5	ND.5	ND.5	ND1		ND1	ND1
Chloroform (ug/l)			ND1		2	2	2	5.6	ND.5	0.55	ND1		ND1	ND1
Ethylbenzene (ug/l)			ND1		2	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	ND1
Trichloroethylene (ug/l)			19		28	52	44	67	51	25	17		27	20
Toluene (ug/l)			ND1		3	ND1	ND1	2.3	ND.5	ND.5	ND1		ND1	ND1
Xylene (ug/l)			ND1		1	ND1		ND.5	ND.5	ND.5	ND1		ND1	ND1
Methylene Chloride (ug/l)			5		ND1	ND1	ND1	ND.5	2.4	3.0	ND1		ND1	ND1	ND1

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 10
WATER-QUALITY DATA
MONITORING WELL #9
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED											
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.4	7.4		7.3	7.0	7.4	6.9	6.8	6.9	7.15		7.0	
TOC (mg/l)		210	14		28	2.8	24	ND3	42	15	3		4.0	
TOX (mg/l)		0.13	.26		.12	.28	.37	.37	.48	.28	.16		0.22	
Sp. Cond. (umhos/cm)		2200	2800		2000	2400	2675	2500	3200	3100	2075		1950	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	0.12	.94	1.30	2.42	1.66	2.75
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	0.05	ND.02	ND.02	0.05	.59	1.30		0.8	1.5
Cadmium (mg/l)		ND.01	ND.00		ND.01	ND1	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	0.018	ND.03	ND.03	ND.03	ND.02		0.05	0.03
Chloride (mg/l)		300	530		250	720	670	470	640	630	290		290	490
Nitrate as N (mg/l)		1.4	8.8		3.2	1.4	3.72	4.1	2.9	8.4	7.2		5.0	7.6
Nitrate as NO_3 (mg/l)		6.3	39		14	6.2	16.5	18	13	37	32		22	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			99		50	360	250	110	140	130	40		ND10	90
1,1-Dichloroethylene (ug/l)			18		18	200	110	44	72	84	50		29	30
1,2-Dichloroethane (ug/l)			10		13	90	52	90	69	ND.5	6		90	ND10
Benzene (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND.7		ND7	ND7
Carbon Tetrachloride (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Chloroform (ug/l)			20		4	30	22	10	19	28	13		ND10	10
Ethylbenzene (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Trichloroethylene (ug/l)			61		3	550	240	150	160	150	17		120	90
Toluene (ug/l)			ND1		ND1	ND5	ND1	0.7	ND2.5	ND.5	ND1		ND10	ND10
Xylene (ug/l)			ND1		ND1	ND5		ND.5	ND2.5	ND.5	ND1		ND10	ND10
Methylene Chloride (ug/l)			110		ND1	ND5	18	29	33	83	35		ND10	10

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 11
WATER-QUALITY DATA
MONITORING WELL #10
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED 2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.8	7.8		7.6	7.4	7.8	7.4	7.2	7.1	7.51		7.20	
TOC (mg/l)		440	10		130	103	135	33.8	158	56	7		29	
TOX (mg/l)		0.17	ND.08		ND.08	.14	.15	.20	.62	.18	.06		0.22	
Sp. Cond. (umhos/cm)		2100	1300		1600	1400	1550	1600	2100	1900	1355		1800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	.05	0.05	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		0.05	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		0.35	ND.02
Chloride (mg/l)			150		120	150	160	160	260	230	100		210	230
Nitrate as N (mg/l)		ND.1	ND.1		0.1	ND.01	ND.1	ND.1	ND.1	ND.1	ND.2		ND.2	ND.2
Nitrate as NO_3 (mg/l)		ND4.4	ND4.4		0.6	ND.04	ND.4	ND.4	ND.4	ND.4	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND50	2		6	ND10	20	ND5	23	21	3.7		32	ND5
1,1-Dichloroethylene (ug/l)		ND50	1		7	14	ND20	ND5	41	28	ND1		21	ND5
1,2-Dichloroethane (ug/l)		ND50	17		86	200	270	63	160	93	15		70	40
Benzene (ug/l)		ND50	ND1		ND1	ND10	ND20	ND5	ND2.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)		ND50	ND1		ND1	ND10	ND20	ND5	ND2.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)		50	ND1		ND1	ND10	ND20	ND5	3.1	2.3	ND1		ND10	ND5
Ethylbenzene (ug/l)		6500	68		ND1	2200	1800	330	2000	360	ND1		ND10	ND5
Trichloroethylene (ug/l)		250	29		56	93	120	62	160	130	14		90	60
Toluene (ug/l)		17000	ND1		ND1	36	560	ND5	14	ND.5	ND1		ND10	ND5
Xylene (ug/l)		20000	ND1		70	90	600	120	500	ND.5	ND1		ND10	ND5
Methylene Chloride (ug/l)		100	ND1		ND1	ND10	ND20	ND5	13	1.8	ND1		ND10	14

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 12
WATER-QUALITY DATA
MONITORING WELL #11
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	DATE SAMPLED												
	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.8		7.2	7.3	7.5	7.5	7.4	7.4	7.34		7.45	
TOC (mg/l)		54	13		120	156	125	26.8	58	61	12		20	
TOX (mg/l)		ND.05	0.1		ND.08	ND.08	.12	.14	.15	ND.08	.07		0.078	
Sp. Cond. (umhos/cm)		1600	1600		1700	1600	1800	1700	2100	1600	1895		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.04	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.01		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.01	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)		220	230		180	230	240	170	270	110	86		120	110
Nitrate as N (mg/l)		1.2	2.5		1.1	ND1	0.1	1.2	0.7	1.5	2.2		1.5	1.7
Nitrate as NO_3 (mg/l)		5.2	11		4.8	ND.4	0.5	5.5	3.3	6.8	9.6		65	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			10	4	10	ND200	ND100	6.9	12	2.3	2.5		ND10	ND5
1,1-Dichloroethylene (ug/l)			8	2	5	ND200	ND100	5.0	11	2.6	2.3		ND10	ND5
1,2-Dichloroethene (ug/l)			8	31	17	ND200	130	95	21	89	21		ND10	60
Benzene (ug/l)			ND1	3	ND1	ND200	ND100	1.5	ND.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)			ND1	ND1	ND1	ND200	ND100	ND.5	ND.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)			3	3	10	ND200	ND100	3.3	3.5	1.0	ND1		ND10	ND5
Ethylbenzene (ug/l)			13	1800	2200	6400	3300	ND.5	1200	180	17		ND10	130
Trichloroethylene (ug/l)			110	36	76	ND200	180	46	81	36	20		70	30
Toluene (ug/l)			ND1	5400	5200	14000	7500	3.6	360	ND.5	ND1		ND10	ND5
Xylene (ug/l)			20	4000	1500	10000	3000	220	370	ND.5	ND1		110	ND5
Methylene Chloride (ug/l)			ND1	ND1	ND1	ND200	ND100	1.8	8.4	ND.5	3		ND10	16

Note: ND 1 = Chemical was not detected at 1 mg/l.

Note: ND 1 = Compound was not detected at 1 ug/l.

TABLE 13
CHEMICAL ANALYSES OF SPLIT SAMPLES
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

COMPOUND	MW 4		MW 10		MW 11	
	C.R.L.	B & C	C.R.L.	B & C	C.R.L.	B & C
Chloromethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Bromomethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Vinyl Chloride (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Chloroethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Methylene Chloride (µg/l)	70	45	14	ND1	16	ND1
1,1-Dichloroethene (µg/l)	50	67	ND5	9	ND5	4
1,1-Dichloroethane (µg/l)	100	110	ND5	7	ND5	4
Trans-1,2-Dichloroethene (µg/l)	ND10	13	ND5	ND1	ND5	ND1
Chloroform (µg/l)	ND10	11	ND5	ND1	ND5	1.4
1,2-Dichloroethane (µg/l)	70	77	40	40	60	67
1,1,1-Trichloroethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Carbon Tetrachloride (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Trichlorofluoromethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
1,2-Dichloropropane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Trichloroethene (µg/l)	250	260	60	62	30	40
Dibromochloromethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
1,1,2-Trichloroethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Cis-1,3-Dichloropropene (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
2-Chloroethyl Vinyl Ether (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Bromoform (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Tetrachloroethene (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
1,1,2,2-Tetrachloroethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Chlorobenzene (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
Bromodichloromethane (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
1,2-Dichlorobenzene (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
1,3-Dichlorobenzene (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1
1,4-Dichlorobenzene (µg/l)	ND10	ND5	ND5	ND1	ND5	ND1

NOTE: ND 1 = Compound was not detected at 1 µg/l.
B & C = Brown & Caldwell Laboratories
CRL = CRL Environmental - South Coast (Enseco)

TABLE 13
CHEMICAL ANALYSES OF SPLIT SAMPLES
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03
(Continued)

COMPOUND	MW 4		MW 10		MW 11	
	C.R.L.	B & C	C.R.L.	B & C	C.R.L.	B & C
Benzene (µg/l)	ND7	ND5	ND3	ND1	ND3	ND1
Toluene (µg/l)	ND10	35	ND5	ND1	ND5	ND1
Ethylbenzene (µg/l)	ND10	24	ND5	2	130	130
Total Xylenes (µg/l)	40	60	ND5	ND1	ND5	ND10
Chromium (total) (mg/l)	180	130	0.06	ND.04	0.05	ND.04
Chromium (Hex) (mg/l)	170	160	ND.05	ND.02	ND.05	ND.02
Nitrate as N (mg/l)	3.9	1.5	ND.2	ND.1	1.7	1.6
Nitrate as NO_3 (mg/l)		6.6		ND.4		7.3
Chloride (mg/l)	1400	1400	230	200	110	110
Cadmium (mg/l)	0.12	0.07	ND.01	ND.02	ND.01	ND.02
Copper (mg/l)	ND.02	ND.02	ND.02	ND.02	ND.02	ND.02
Zinc (mg/l)	ND.02	ND.03	ND.02	ND.03	0.02	ND.03

NOTE: ND 1 = Compound was not detected at 1 µg/l.
B & C = Brown & Caldwell Laboratories
CRL = CRL Environmental - South Coast (Enseco)

TABLE 14
SEQUENCE OF SAMPLING
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

MONITORING WELL NO.	1,1-DI-CHLOROETHANE (µg/l)	1,1-DICHLORO-ETHYLENE (µg/l)	ETHYL-BENZENE (µg/l)	TRICHLORO-ETHYLENE (µg/l)	TOLUENE (µg/l)	CHLOROFORM (µg/l)
QC 2184	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
MW 1	NA	NA	NA	NA	NA	NA
MW 2	NA	NA	NA	NA	NA	NA
MW 8	2	ND 1	ND 1	20	ND 1	ND1
QC 2198	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
MW 7	NA	NA	NA	NA	NA	NA
MW 6B	NA	NA	NA	NA	NA	NA
MW 9	90	30	ND10	90	ND10	10
QC 2216	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
MW 5	NA	NA	NA	NA	NA	NA
MW 4A	NA	NA	NA	NA	NA	NA
MW 10	ND5	ND5	ND5	60	ND5	ND5
QC 2244	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
MW 11	ND5	ND5	130	30	ND 10	ND5
MW 3	ND25	ND25	1000	150	ND 25	ND 25
MW 4	100	50	ND 10	250	ND 10	ND 10
QC 2283	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1

NOTES: ND 1 = Compound was not detected at 1 µg/l.
NA = Not analyzed.

TABLE 15
CHEMICAL ANALYSES OF SPIKED SAMPLES
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-07

		A.T.I.		B & C		CRL	
COMPOUND	Calculated Concentration	Detected Concentration	% Recovery	Detected Concentration	% Recovery	Detected Concentration	% Recovery
Benzene (µg/l)	49.1	41	83	47	96	46	94
Bromoform (µg/l)	51.0	44	86	38	75	60	117
Chlorobenzene (µg/l)	49.5	40	81	45	91	60	121
m-Dichlorobenzene (µg/l)	50.0	40	80	44	88	50	100
o-Dichlorobenzene (µg/l)	49.5	49	99	36	73	80	162
p-Dichlorobenzene (µg/l)	52.0	41	79	46	88	60	115
1,1-Dichloroethene (µg/l)	50.0	35	70	43	86	60	120
cis & trans 1,2-Dichloroethene (µg/l)	51.0	42	82	47	92	70	137
1,1- & trans 1,3-Dichloropropene (µg/l)	50.5	56	111	33	65	60	118
Ethylbenzene (µg/l)	50.0	38	76	46	92	51	102
1,1,2,2-Tetrachloroethene (µg/l)	50.0	31	62	40	80	60	120
Trichloroethene (µg/l)	49.8	35	71	40	81	60	121
1,1,1-Trichloroethane (µg/l)	49.8	39	79	43	87	80	162
1,1,2-Trichloroethane (µg/l)	50.5	78	154	45	89	60	119
Toluene (µg/l)	50.0	39	78	45	90	49	98
Total Xylenes (µg/l)	148.5	111	151	120	81	150	101
Chromium (µg/l)	0.10	0.10	100	0.07	70	0.10	100
Copper (µg/l)	0.10	0.09	90	0.08	80	0.08	80
Zinc (µg/l)	0.10	0.13	130	0.12	120	0.12	120

NOTE: A.T.I. = Analytical Technologies, Inc.
B & C = Brown & Caldwell Laboratories
C.R.L. = Chemical Research Laboratories

TABLE 16
GROUNDWATER LEVEL ELEVATIONS*
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

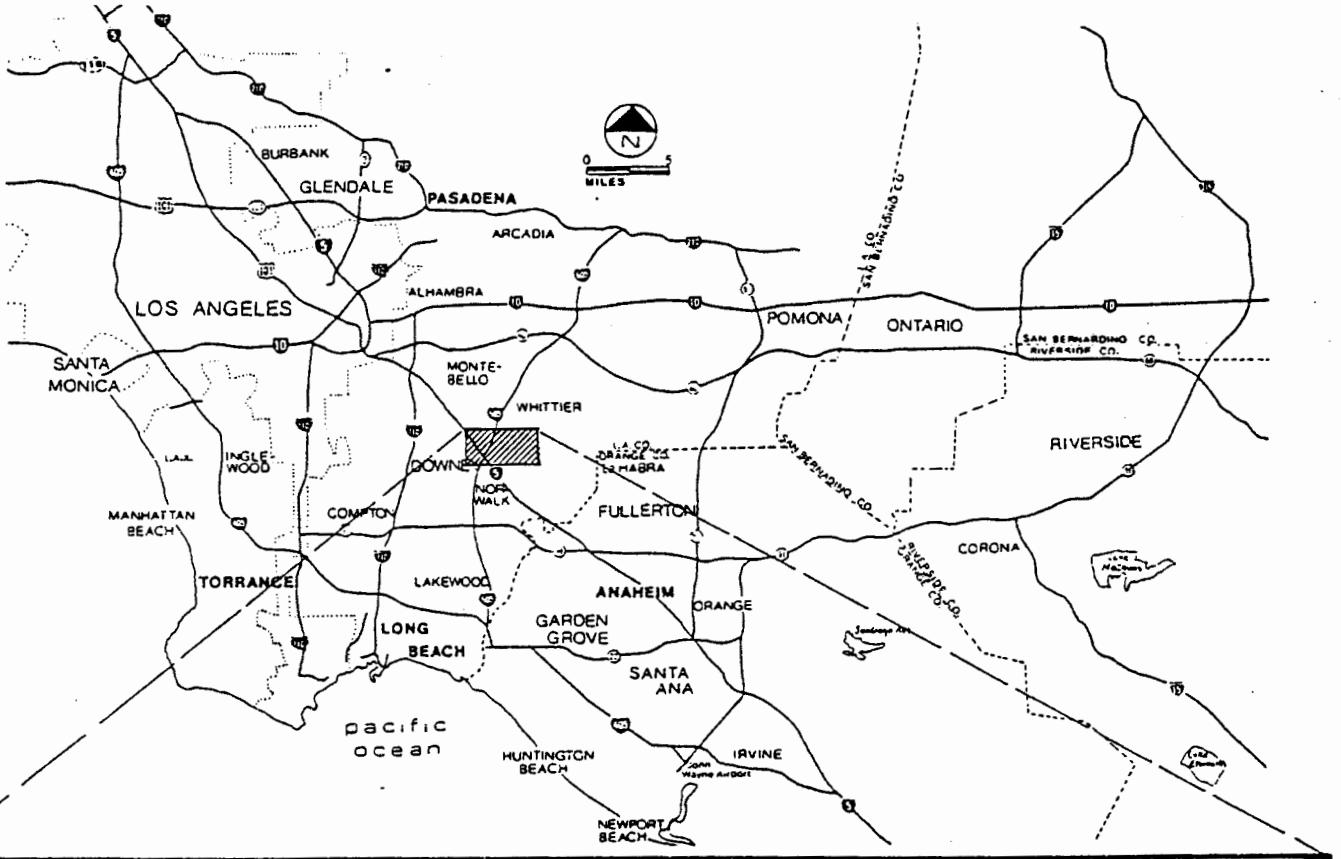
Well	Well Head Elevation (feet MSL)	Well Depth**	Perforated Interval**	2/22/85-3/12/85	4/9/85	7/24/85-8/5/85	8/19/85	9/20/85	3/19/86	7/9/86	9/24/86	12/17/86	3/31/87	7/1/87	10/17/87	2/2/88
1	152.6	62.5	42.5-62.5	108.49	108.48	109.66	108.16	106.05	103.40	107.78	105.15	103.65	103.71	103.57	100.09	100.21
2	151.56	74.0	44-74	107.31	107.72	109.21	107.56	105.49	102.44	107.04	104.05	102.96	106.58	103.95	98.85	99.24
3	151.62	75.0	45-75	106.37	107.52	108.37	106.65	104.46	101.22	106.03	103.15	102.07	102.96	101.87	97.77	98.22
4	149.76	75.0	45-75	105.76	108.11	108.36	105.16	104.50	101.42	105.94	102.98	101.81	101.78	102.95	98.76	98.21
4A	152.49	107.0	87-107			108.84	109.43	104.49	102.67	107.29	104.29	102.09		104.19	98.92	98.47
5	153.21	75.0	45-75	105.71	106.02	107.68	106.03	103.84	100.46	105.40	102.49	101.41	101.37	98.51	96.24	97.52
6A	149.31	30.0	10-30		119.39		120.91									
6B	149.46	77.0	47-77	106.46	106.80		107.81	104.92	101.48	106.02	103.21	102.16	101.95	103.11	98.28	98.44
7	149.27	75.0	45-75			107.48	105.34	104.33	101.07	105.73	102.63	101.57	101.52	99.20	97.75	98.22
8	149.53	71.0	41-71			107.95	106.86	104.78	101.65	106.26	103.17	101.98	101.68	101.52	98.12	98.19
9	151.14	77.0	47-77			108.35	106.98	104.25	102.14	106.72	103.64	102.74	104.02	103.53	98.56	98.85
10	151.60	75.0	45-75			107.88	106.94	104.87	102.80	106.26	103.15	102.40	102.62	102.14	98.01	98.69
11	152.80	75.5	55-75			108.38	107.17	105.03	101.96	106.61	103.34	102.65	102.91	102.41	98.21	98.97

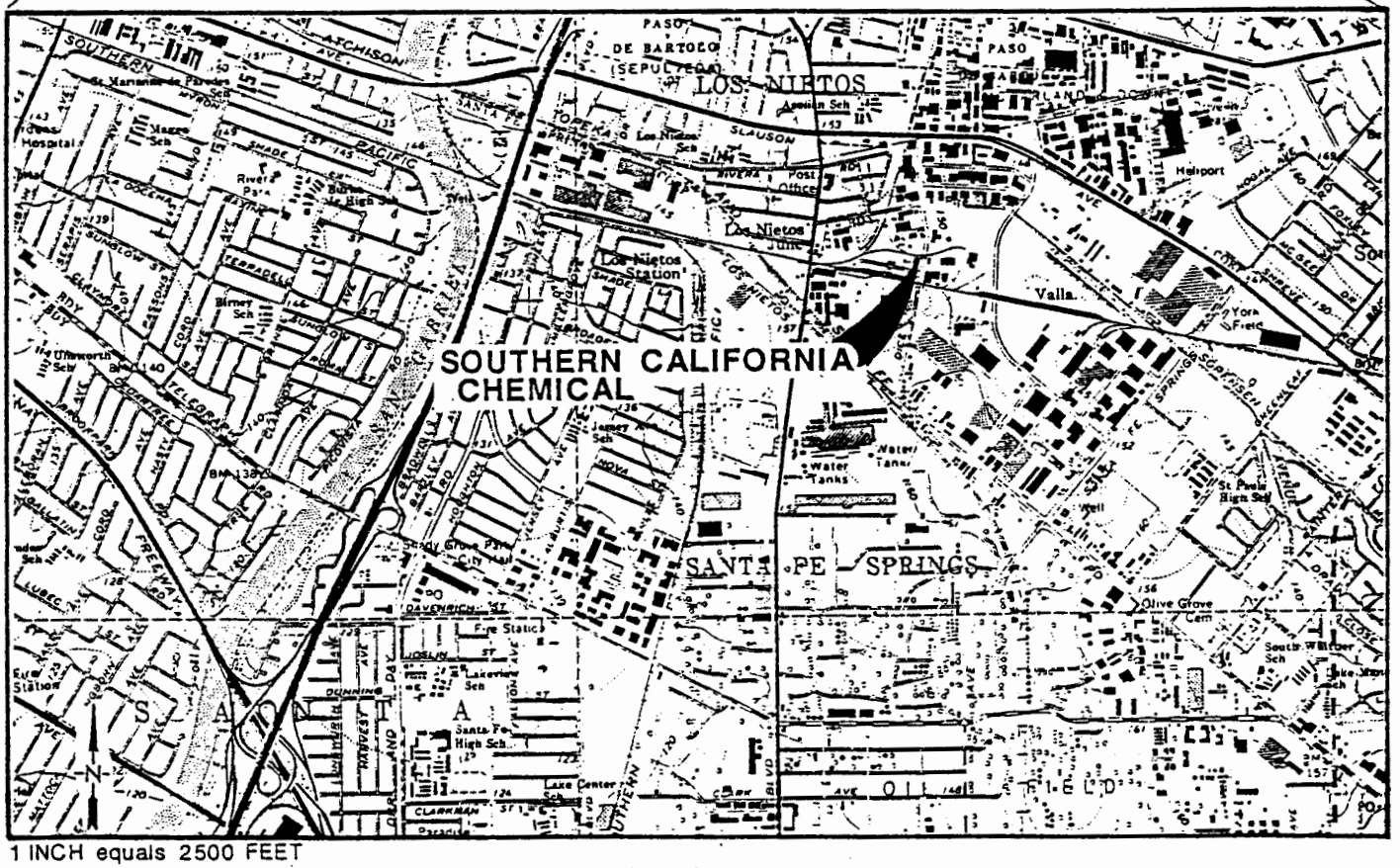
Notes: * = Elevations in feet above mean sea level (MSL).
** = Feet below ground surface.

TABLE 16
GROUNDWATER LEVEL ELEVATIONS*
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03
(Continued)

Well	Well Head Elevation (feet MSL)	Well Depth**	Perforated Interval**	6/15/88	9/88
1	152.6	62.5	42.5-62.5	100.35	98.20
2	151.56	74.0	44-74	98.96	97.18
3	151.76	75.0	45-75	98.72	95.93
4	149.76	75.0	45-75	98.56	96.11
4A	152.49	107.0	87-107	99.44	97.35
5	153.21	75.0	45-75	97.92	95.34
6A	149.31	30.0	10-30		
6B	149.46	77.0	47-77	98.74	96.57
7	149.27	75.0	45-75	98.32	95.86
8	149.53	71.0	41-71	98.62	96.45
9	151.14	77.0	47-77	99.26	96.83
10	151.60	75.0	45-75	99.15	96.55
11	152.80	75.5	55-75	99.50	96.57

Notes: * = Elevations in feet above mean sea level (MSL).
** = Feet below ground surface.





1 INCH equals 2500 FEET

Map reduced from a portion of U.S.G.S. 7.5' topographic series, Whittier, California Quadrangle.

KLEINFELDER

Project Number 50-1014-03 DECEMBER 1988

SOUTHERN CALIFORNIA CHEMICAL
Santa Fe Springs, California

SITE LOCATION MAP

FIGURE

1

KLEINFELDER

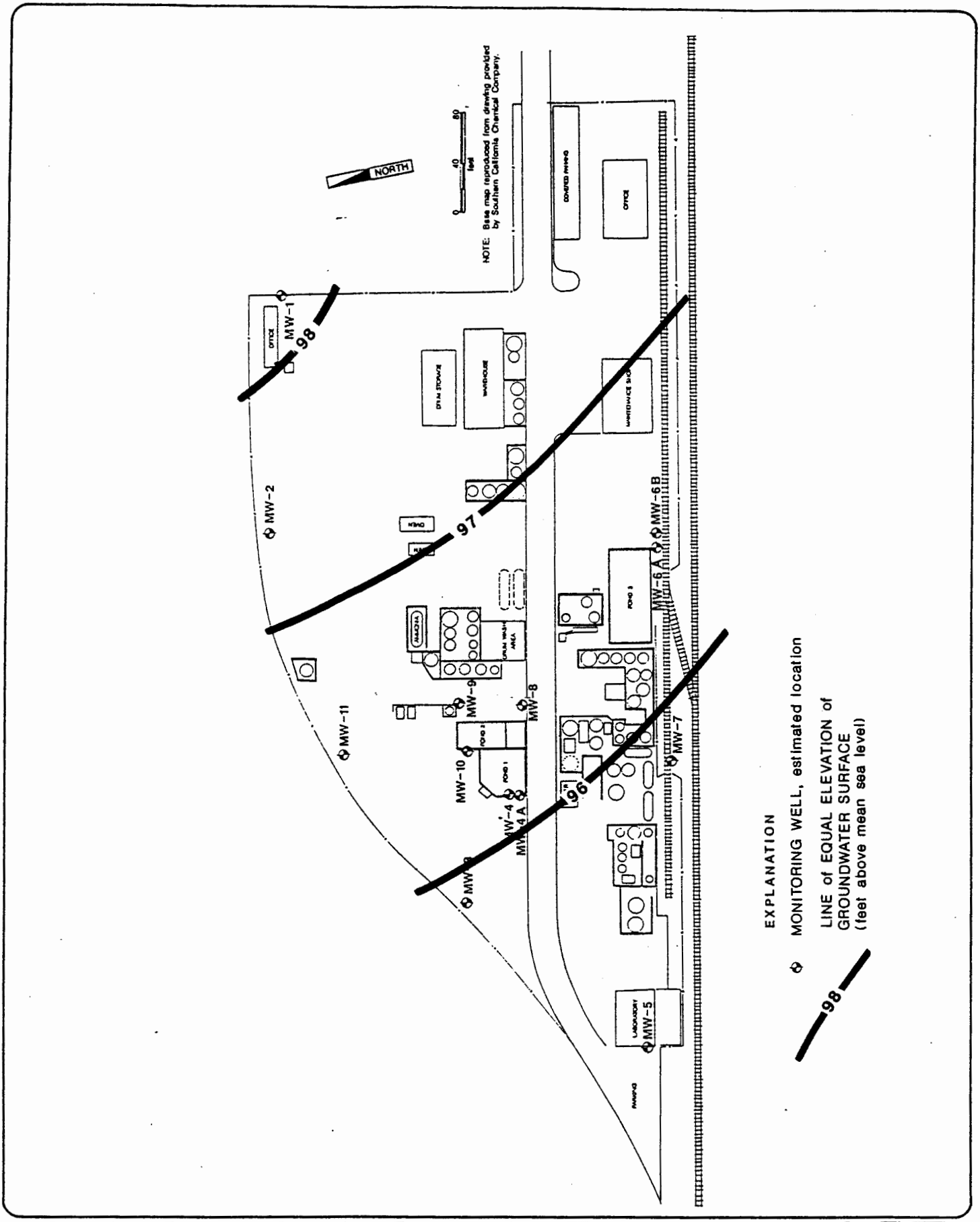
Project Number 50-1014-03 DECEMBER 1988

SOUTHERN CALIFORNIA CHEMICAL
Santa Fe Springs, California

MONITORING WELL LOCATION MAP

FIGURE

2



KLEINFELDER

Project Number 50-1014-03 DECEMBER 1988

SOUTHERN CALIFORNIA CHEMICAL
Santa Fe Springs, California

GROUNDWATER CONTOUR MAP

FIGURE
3

KLEINFELDER

Project Number 50-1014-03 DECEMBER 1988

SOUTHERN CALIFORNIA CHEMICAL
Santa Fe Springs, California

CONCENTRATIONS of ETHYL BENZENE IN SHALLOW GROUNDWATER

FIGURE 4

EXPLANATION

MW-X MONITORING WELL, estimated location

1000 with concentration of ethyl benzene in shallow groundwater (ug/l, micrograms per liter)

nd = non-detected

KLEINFELDER

Project Number 50-1014-03 DECEMBER 1988

SOUTHERN CALIFORNIA CHEMICAL
Santa Fe Springs, California

CONCENTRATIONS of TOLUENE IN SHALLOW GROUNDWATER

FIGURE 5

EXPLANATION

MW-1 MONITORING WELL, estimated location

40 with concentration of toluene in shallow groundwater (ug/l, micrograms per liter)

nd = non-detected

APPENDIX A

ANALYTICAL RESULTS

Enseco

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

October 10, 1988

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826524-001/006
ANALYSES: Miscellaneous
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
PROJECT: 50-1014-3

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 826524-001/006 shown above.

Six liquid samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826524-001/006
ANALYSES: Miscellaneous
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
PROJECT: 50-1014-3

THE FOLLOWING TESTS WERE PERFORMED ON THE SAMPLES RECEIVED:

TEST	METHOD	REFERENCE	COMMENTS
Aromatic Volatile Organics (Liquid)	EPA 602	EPA 600[1], 1982	GC/PID
Halogenated Volatile Organics (Liquid)	EPA 601	EPA 600[1], 1982	GC/Hall Detector
Nitrate as Nitrogen	EPA 300.0	EPA 600[2], 1984	IC
Chloride	EPA 300.0	EPA 600[2], 1984	IC
Metals	EPA 6010	SW 846, 1986	ICP
Chromium, Hexavalent	EPA 7196	SW 846, 1986	Colorimetric

[1]Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

[2]Methods for Chemical Analysis of Water and Wastes.

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-1-2186, 2187, 2188

ANALYSIS NO.: 826524-002
ANALYSES: Miscellaneous
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/23-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	0.07	ND	0.02
Chromium-Hexavalent	(EPA 7196)	ND	ND	0.05
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	0.08	ND	0.02
Chloride	(EPA 300.0)	630.	ND	0.1
Nitrate as Nitrogen	(EPA 300.0)	2.9	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-2-2189, 2190, 2191

ANALYSIS NO.: 826524-003
ANALYSES: Miscellaneous
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/23-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	0.06	ND	0.02
Chromium-Hexavalent	(EPA 7196)	ND	ND	0.05
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	0.03	ND	0.02
Chloride	(EPA 300.0)	160.	ND	0.1
Nitrate as Nitrogen	(EPA 300.0)	7.1	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-8-2196, 2197, 2198

ANALYSIS NO.: 826524-004
ANALYSES: Miscellaneous
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/23-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	0.05	ND	0.02
Chromium-Hexavalent	(EPA 7196)	ND	ND	0.05
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	0.04	ND	0.02
Chloride	(EPA 300.0)	130.	ND	0.1
Nitrate as Nitrogen	(EPA 300.0)	5.7	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-00-2184

ANALYSIS NO.: 826524-001
ANALYSES: EPA Method 601
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	0.001	0.002	0.001
Trichlorofluoromethane	ND	ND	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-8-2192

ANALYSIS NO.: 826524-004
ANALYSES: EPA Method 601
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	ND	0.002	0.001
Trichlorofluoromethane	ND	ND	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	0.002	ND	0.001
Trans-1,2-Dichloroethene	0.06	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	0.03	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	0.02	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-00-2199

ANALYSIS NO.: 826524-005
ANALYSES: EPA Method 601
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	ND	0.002	0.001
Trichlorofluoromethane	ND	ND	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: Trip Blank

ANALYSIS NO.: 826524-006
ANALYSES: EPA Method 601
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/24/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	ND	ND	0.001
Trichlorofluoromethane	ND	ND	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-00-2185

ANALYSIS NO.: 826524-001
ANALYSES: EPA Method 602
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	0.03	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-8-2194

ANALYSIS NO.: 826524-004
ANALYSES: EPA Method 602
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-00-2201

ANALYSIS NO.: 826524-005
ANALYSES: EPA Method 602
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: Trip Blank

ANALYSIS NO.: 826524-006
ANALYSES: EPA Method 602
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
DATE ANALYZED: 09/24/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826524-001/006
ANALYSES: Miscellaneous
DATE SAMPLED: 09/21/88
DATE SAMPLE REC'D: 09/21/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/24/88	Toluene (EPA 602)	105	60-120	19	40
09/24/88	Ethylbenzene (EPA 602)	99	60-120	22	40
09/24/88	Xylenes (EPA 602)	101	60-120	24	40
09/26/88	Toluene (EPA 602)	112	60-120	10	40
09/26/88	Ethylbenzene (EPA 602)	109	60-120	10	40
09/26/88	Xylenes (EPA 602)	98	60-120	8	40
09/24/88	1,1-Dichloroethene (EPA 601)	114	60-120	26	40
09/24/88	Trichlorobenzene (EPA 601)	104	60-120	1	40
09/24/88	Chlorobenzene (EPA 601)	106	60-120	21	40
09/26/88	1,1-Dichloroethene (EPA 601)	91	60-120	2	40
09/26/88	Trichlorobenzene (EPA 601)	109	60-120	2	40
09/26/88	Chlorobenzene (EPA 601)	99	60-120	14	40
09/23/88	Chloride (EPA 300.0)	98	88-118	2	13
09/23/88	Nitrate as Nitrogen (EPA 300.0)	107	86-124	1	12
09/30/88	Cadmium (EPA 6010)	101	70-142	1	28
09/30/88	Chromium (EPA 6010)	108	66-149	1	47
09/30/88	Copper (EPA 6010)	99	63-131	1	37
09/30/88	Zinc (EPA 6010)	111	70-140	19	36
09/23/88	Chromium, Hexavalent (EPA 7196)	130	60-130	0	40

Enseco

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

October 11, 1988

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 827019-001/006
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
PROJECT: 50-1014-03

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 827019-001/006 shown above.

Seven liquid samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached. One liquid sample was on hold.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 827019-001/006
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
PROJECT: 50-1014-03

THE FOLLOWING TESTS WERE PERFORMED ON THE SAMPLES RECEIVED:

TEST	METHOD	REFERENCE	COMMENTS
Aromatic Volatile Organics (Liquid)	EPA 602	EPA 600[1], 1982	GC/PID Detector
Halogenated Volatile Organics (Liquid)	EPA 601	EPA 600[1], 1982	GC/Hall Detector
Chromium	EPA 6010	SW 846, 1986	ICP
Cadmium	EPA 6010	SW 846, 1986	ICP
Copper	EPA 6010	SW 846, 1986	ICP
Zinc	EPA 6010	SW 846, 1986	ICP
Chloride	EPA 300.0	EPA 600[2], 1984	IC
Nitrates as Nitrogen	EPA 300.0	EPA 600[2], 1984	IC
Chromium, Hexavalent	EPA 7196	SW 846, 1986	Colorimetric

[1]Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

[2]Methods for Chemical Analysis of Water and Wastes.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-10-2234, 2235, 2236

ANALYSIS NO.: 827019-001
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/28-10/04/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

MISCELLANEOUS

UNITS: mg/L

PARAMETERS	RESULTS	BLANK	DETECTION LIMIT
Cadmium (EPA 6010)	ND	ND	0.01
Chromium (EPA 6010)	0.06	ND	0.02
Chromium, Hexavalent (EPA 7196)	ND	ND	0.05
Copper (EPA 6010)	ND	ND	0.02
Zinc (EPA 6010)	ND	ND	0.02
Chloride (EPA 300.0)	230.	ND	0.1
Nitrate as Nitrogen (EPA 300.0)	ND	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-11-2252, 2253, 2254

ANALYSIS NO.: 827019-002
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/28-10/04/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

MISCELLANEOUS

UNITS: mg/L

PARAMETERS	RESULTS	BLANK	DETECTION LIMIT
Cadmium (EPA 6010)	ND	ND	0.01
Chromium (EPA 6010)	0.05	ND	0.02
Chromium, Hexavalent (EPA 7196)	ND	ND	0.05
Copper (EPA 6010)	ND	ND	0.02
Zinc (EPA 6010)	0.02	ND	0.02
Chloride (EPA 300.0)	110.	ND	0.1
Nitrate as Nitrogen (EPA 300.0)	1.7	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-3-2266, 2267, 2268

ANALYSIS NO.: 827019-003
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/28-10/04/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

MISCELLANEOUS

UNITS: mg/L

PARAMETERS	RESULTS	BLANK	DETECTION LIMIT
Cadmium (EPA 6010)	ND	ND	0.01
Chromium (EPA 6010)	0.07	ND	0.02
Chromium, Hexavalent (EPA 7196)	ND	ND	0.05
Copper (EPA 6010)	0.02	ND	0.02
Zinc (EPA 6010)	0.02	ND	0.02
Chloride (EPA 300.0)	840.	ND	0.1
Nitrate as Nitrogen (EPA 300.0)	4.8	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-4-2273, 2274, 2275

ANALYSIS NO.: 827019-004
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/28-10/04/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

MISCELLANEOUS

UNITS: mg/L

PARAMETERS	RESULTS	BLANK	DETECTION LIMIT
Cadmium (EPA 6010)	0.12	ND	0.01
Chromium (EPA 6010)	180.	ND	0.02
Chromium, Hexavalent (EPA 7196)	170.	ND	25.
Copper (EPA 6010)	ND	ND	0.02
Zinc (EPA 6010)	ND	ND	0.02
Chloride (EPA 300.0)	1,400.	ND	0.1
Nitrate as Nitrogen (EPA 300.0)	3.9	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-10-2230

ANALYSIS NO.: 827019-001
ANALYSES: EPA Method 601
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK*	DETECTION LIMIT
Chloromethane	ND	ND	0.005
Bromomethane	ND	ND	0.005
Vinyl Chloride	ND	ND	0.005
Chloroethane	ND	ND	0.005
Methylene Chloride	0.014	0.020	0.005
1,1-Dichloroethene	ND	ND	0.005
1,1-Dichloroethane	ND	ND	0.005
Trans-1,2-Dichloroethene	ND	ND	0.005
Chloroform	ND	ND	0.005
1,2-Dichloroethane	0.04	ND	0.005
1,1,1-Trichloroethane	ND	ND	0.005
Carbon Tetrachloride	ND	ND	0.005
Trichlorofluoromethane	ND	ND	0.005
1,2-Dichloropropane	ND	ND	0.005
Trans-1,3-Dichloropropene	ND	ND	0.005
Trichloroethene	0.06	ND	0.005
Dibromochloromethane	ND	ND	0.005
1,1,2-Trichloroethane	ND	ND	0.005
cis-1,3-Dichloropropene	ND	ND	0.005
2-Chloroethyl Vinyl Ether	ND	ND	0.005
Bromoform	ND	ND	0.005
Tetrachloroethene	ND	ND	0.005
1,1,2,2-Tetrachloroethane	ND	ND	0.005
Chlorobenzene	ND	ND	0.005
Bromodichloromethane	ND	ND	0.005
1,2-Dichlorobenzene	ND	ND	0.005
1,3-Dichlorobenzene	ND	ND	0.005
1,4-Dichlorobenzene	ND	ND	0.005

*Blank concentration adjusted for sample dilution.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-11-2248

ANALYSIS NO.: 827019-002
ANALYSES: EPA Method 601
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK*	DETECTION LIMIT
Chloromethane	ND	ND	0.005
Bromomethane	ND	ND	0.005
Vinyl Chloride	ND	ND	0.005
Chloroethane	ND	ND	0.005
Methylene Chloride	0.016	0.020	0.005
1,1-Dichloroethene	ND	ND	0.005
1,1-Dichloroethane	ND	ND	0.005
Trans-1,2-Dichloroethene	ND	ND	0.005
Chloroform	ND	ND	0.005
1,2-Dichloroethane	0.06	ND	0.005
1,1,1-Trichloroethane	ND	ND	0.005
Carbon Tetrachloride	ND	ND	0.005
Trichlorofluoromethane	ND	ND	0.005
1,2-Dichloropropane	ND	ND	0.005
Trans-1,3-Dichloropropene	ND	ND	0.005
Trichloroethene	0.03	ND	0.005
Dibromochloromethane	ND	ND	0.005
1,1,2-Trichloroethane	ND	ND	0.005
cis-1,3-Dichloropropene	ND	ND	0.005
2-Chloroethyl Vinyl Ether	ND	ND	0.005
Bromoform	ND	ND	0.005
Tetrachloroethene	ND	ND	0.005
1,1,2,2-Tetrachloroethane	ND	ND	0.005
Chlorobenzene	ND	ND	0.005
Bromodichloromethane	ND	ND	0.005
1,2-Dichlorobenzene	ND	ND	0.005
1,3-Dichlorobenzene	ND	ND	0.005
1,4-Dichlorobenzene	ND	ND	0.005

*Blank concentration adjusted for sample dilution.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-3-2262

ANALYSIS NO.: 827019-003
ANALYSES: EPA Method 601
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK*	DETECTION LIMIT
Chloromethane	ND	ND	0.025
Bromomethane	ND	ND	0.025
Vinyl Chloride	ND	ND	0.025
Chloroethane	ND	ND	0.025
Methylene Chloride	0.1	0.1	0.025
1,1-Dichloroethene	ND	ND	0.025
1,1-Dichloroethane	ND	ND	0.025
Trans-1,2-Dichloroethene	ND	ND	0.025
Chloroform	ND	ND	0.025
1,2-Dichloroethane	ND	ND	0.025
1,1,1-Trichloroethane	ND	ND	0.025
Carbon Tetrachloride	ND	ND	0.025
Trichlorofluoromethane	ND	ND	0.025
1,2-Dichloropropane	ND	ND	0.025
Trans-1,3-Dichloropropene	ND	ND	0.025
Trichloroethene	0.15	ND	0.025
Dibromochloromethane	ND	ND	0.025
1,1,2-Trichloroethane	ND	ND	0.025
cis-1,3-Dichloropropene	ND	ND	0.025
2-Chloroethyl Vinyl Ether	ND	ND	0.025
Bromoform	ND	ND	0.025
Tetrachloroethene	ND	ND	0.025
1,1,2,2-Tetrachloroethane	ND	ND	0.025
Chlorobenzene	ND	ND	0.025
Bromodichloromethane	ND	ND	0.025
1,2-Dichlorobenzene	ND	ND	0.025
1,3-Dichlorobenzene	ND	ND	0.025
1,4-Dichlorobenzene	ND	ND	0.025

*Blank concentration adjusted for sample dilution.

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-4-2269

ANALYSIS NO.: 827019-004
ANALYSES: EPA Method 601
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK*	DETECTION LIMIT
Chloromethane	ND	ND	0.01
Bromomethane	ND	ND	0.01
Vinyl Chloride	ND	ND	0.01
Chloroethane	ND	ND	0.01
Methylene Chloride	0.07	0.04	0.01
1,1-Dichloroethene	0.05	ND	0.01
1,1-Dichloroethane	0.10	ND	0.01
Trans-1,2-Dichloroethene	ND	ND	0.01
Chloroform	ND	ND	0.01
1,2-Dichloroethane	0.07	ND	0.01
1,1,1-Trichloroethane	ND	ND	0.01
Carbon Tetrachloride	ND	ND	0.01
Trichlorofluoromethane	ND	ND	0.01
1,2-Dichloropropane	ND	ND	0.01
Trans-1,3-Dichloropropene	ND	ND	0.01
Trichloroethene	0.25	ND	0.01
Dibromochloromethane	ND	ND	0.01
1,1,2-Trichloroethane	ND	ND	0.01
cis-1,3-Dichloropropene	ND	ND	0.01
2-Chloroethyl Vinyl Ether	ND	ND	0.01
Bromoform	ND	ND	0.01
Tetrachloroethene	ND	ND	0.01
1,1,2,2-Tetrachloroethane	ND	ND	0.01
Chlorobenzene	ND	ND	0.01
Bromodichloromethane	ND	ND	0.01
1,2-Dichlorobenzene	ND	ND	0.01
1,3-Dichlorobenzene	ND	ND	0.01
1,4-Dichlorobenzene	ND	ND	0.01

*Blank concentration adjusted for sample dilution.

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2244

ANALYSIS NO.: 827019-005
ANALYSES: EPA Method 601
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/29/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	0.025	0.004	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Trichlorofluoromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2283

ANALYSIS NO.: 827019-006
ANALYSES: EPA Method 601
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/29/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	0.002	0.004	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Trichlorofluoromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-10-2232

ANALYSIS NO.: 827019-001
ANALYSES: EPA Method 602
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.003
Toluene	ND	ND	0.005
Ethylbenzene	ND	ND	0.005
Total Xylenes	ND	ND	0.005

Note: Higher detection limits due to matrix interference.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-11-2250

ANALYSIS NO.: 827019-002
ANALYSES: EPA Method 602
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.003
Toluene	ND	ND	0.005
Ethylbenzene	0.13	ND	0.005
Total Xylenes	ND	ND	0.005

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-3-2264

ANALYSIS NO.: 827019-003
ANALYSES: EPA Method 602
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.017
Toluene	ND	ND	0.025
Ethylbenzene	1.	ND	0.025
Total Xylenes	0.2	ND	0.025

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-4-2271

ANALYSIS NO.: 827019-004
ANALYSES: EPA Method 602
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.007
Toluene	ND	ND	0.01
Ethylbenzene	ND	ND	0.01
Total Xylenes	0.04	ND	0.01

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2244

ANALYSIS NO.: 827019-005
ANALYSES: EPA Method 602
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/29/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2283

ANALYSIS NO.: 827019-006
ANALYSES: EPA Method 602
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
DATE ANALYZED: 09/29/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 827019-001/006
ANALYSES: Miscellaneous
DATE SAMPLED: 09/26/88
DATE SAMPLE REC'D: 09/26/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-03

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/29/88	Chloride (EPA 300.0)	95	88-118	2	13
09/30/88	Nitrate as Nitrogen (EPA 300.0)	100	86-124	0	12
10/04/88	Cadmium (EPA 6010)	118	70-142	3	28
10/04/88	Chromium (EPA 6010)	109	66-149	4	47
09/29/88	Chromium, Hex. (EPA 7196)	108	60-130	0	40
10/04/88	Copper (EPA 6010)	95	63-131	1	37
10/04/88	Zinc (EPA 6010)	106	70-140	4	36
09/30/88	1,1-Dichloroethene (EPA 601)	88	60-120	22	40
09/30/88	Trichloroethene (EPA 601)	101	60-120	13	40
09/30/88	Chlorobenzene (EPA 601)	90	60-120	9	40
09/30/88	Toluene (EPA 602)	99	60-120	1	40
09/30/88	Ethylbenzene (EPA 602)	91	60-120	3	40
09/30/88	Xylenes (EPA 602)	90	60-120	10	40
09/29/88	1,1-Dichloroethene (EPA 601)	90	60-120	19	40
09/29/88	Trichloroethene (EPA 601)	91	60-120	2	40
09/29/88	Chlorobenzene (EPA 601)	94	60-120	2	40
09/29/88	Toluene (EPA 602)	79	60-120	5	40
09/29/88	Ethylbenzene (EPA 602)	84	60-120	9	40
09/29/88	Xylenes (EPA 602)	84	60-120	16	40

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

October 14, 1988

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826729-001/002
ANALYSES: Miscellaneous
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
PROJECT: 50-1014-3

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 826729-001/002 shown above.

Three liquid samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached. One liquid sample was on hold.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826729-001/002
ANALYSES: Miscellaneous
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
PROJECT: 50-1014-3

THE FOLLOWING TESTS WERE PERFORMED ON THE SAMPLES RECEIVED:

TEST	METHOD	REFERENCE	COMMENTS
Aromatic Volatile Organics (Liquid)	EPA 602	EPA 600[1], 1982	GC/PID
Nitrates as Nitrogen	EPA 300.0	EPA 600[2], 1984	IC
Halogenated Volatile Organics (Liquid)	EPA 601	EPA 600[1], 1982	GC/Hall Detector
Metal	EPA 6010	SW 846, 1986	ICP
Chloride	EPA 300.0	EPA 600[2], 1984	IC
Chromium, Hexavalent	EPA 7196	SW 846, 1986	Colorimetric

[1]Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

[2]Methods for Chemical Analysis of Water and Wastes.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2224

ANALYSIS NO.: 826729-002
ANALYSES: EPA Method 601
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK*	DETECTION LIMIT
Chloromethane	ND	ND	0.005
Bromomethane	ND	ND	0.005
Vinyl Chloride	ND	ND	0.005
Chloroethane	ND	ND	0.005
Methylene Chloride	ND	0.005	0.005
1,1-Dichloroethene	0.06	ND	0.005
1,1-Dichloroethane	ND	ND	0.005
Trans-1,2-Dichloroethene	0.07	ND	0.005
Chloroform	ND	ND	0.005
1,2-Dichloroethane	ND	ND	0.005
1,1,1-Trichloroethane	0.08	ND	0.005
Carbon Tetrachloride	ND	ND	0.005
Trichlorofluoromethane	ND	ND	0.005
1,2-Dichloropropane	ND	ND	0.005
Trans-1,3-Dichloropropene	0.06	ND	0.005
Trichloroethene	0.06	ND	0.005
Dibromochloromethane	ND	ND	0.005
1,1,2-Trichloroethane	0.06	ND	0.005
cis-1,3-Dichloropropene	ND	ND	0.005
2-Chloroethyl Vinyl Ether	ND	ND	0.005
Bromoform	0.06	ND	0.005
Tetrachloroethene	0.06	ND	0.005
1,1,2,2-Tetrachloroethane	ND	ND	0.005
Chlorobenzene	0.06	ND	0.005
Bromodichloromethane	ND	ND	0.005
1,2-Dichlorobenzene	0.05	ND	0.005
1,3-Dichlorobenzene	0.08	ND	0.005
1,4-Dichlorobenzene	0.06	ND	0.005

*Blank concentration adjusted for sample dilution.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2224

ANALYSIS NO.: 826729-002
ANALYSES: EPA Method 602
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	0.046	ND	0.0035
Toluene	0.049	ND	0.005
Ethylbenzene	0.051	ND	0.005
Total Xylenes	0.15	ND	0.005

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-4A-2221, 2222, 2223

ANALYSIS NO.: 826729-001
ANALYSES: Miscellaneous
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/29-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS	RESULTS	BLANK	DETECTION LIMIT
Cadmium (EPA 6010)	ND	ND	0.01
Chromium (EPA 6010)	0.06	ND	0.02
Chromium-Hexavalent (EPA 7196)	ND	ND	0.05
Copper (EPA 6010)	ND	ND	0.02
Zinc (EPA 6010)	0.02	ND	0.02
Chloride (EPA 300.0)	160.	ND	0.1
Nitrate as Nitrogen (EPA 300.0)	6.3	ND	0.2

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

Sample ID: W-00-2226

ANALYSIS NO.: 826729-002
ANALYSES: Metals
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

METALS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chromium	0.10	ND	0.02
Copper	0.08	ND	0.02
Zinc	0.12	ND	0.02

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826729-001/002
ANALYSES: Miscellaneous
DATE SAMPLED: 09/23/88
DATE SAMPLE REC'D: 09/23/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/28/88	1,1-Dichloroethene (EPA 601)	118	60-120	28	40
09/28/88	Trichloroethene (EPA 601)	112	60-120	28	40
09/28/88	Chlorobenzene (EPA 601)	96	60-120	6	40
09/28/88	Toluene (EPA 602)	78	60-120	1	40
09/28/88	Ethylbenzene (EPA 602)	80	60-120	6	40
09/28/88	Xylenes (EPA 602)	75	60-120	7	40
09/30/88	Cadmium (EPA 6010)	101	70-142	1	28
09/30/88	Chromium (EPA 6010)	108	66-149	1	47
09/29/88	Chromium, Hex. (EPA 7196)	108	60-130	0	40
09/30/88	Copper (EPA 6010)	99	63-131	1	37
09/30/88	Zinc (EPA 6010)	111	70-140	19	36
09/30/88	Chloride (EPA 300.0)	95	88-118	2	13
09/30/88	Nitrate as Nitrogen (EPA 300.0)	100	86-124	0	12

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

October 10, 1988

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826723-001/009
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
PROJECT: 50-1014-3

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: 826723-001/009 shown above.

Nine liquid samples were received by CRL in a chilled state, intact, and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

REVIEWED

APPROVED

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826723-001/009
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
PROJECT: 50-1014-3

THE FOLLOWING TESTS WERE PERFORMED ON THE SAMPLES RECEIVED:

TEST	METHOD	REFERENCE	COMMENTS
Aromatic Volatile Organics (Liquid)	EPA 602	EPA 600[1], 1982	GC/PID
Halogenated Volatile Organics (Liquid)	EPA 601	EPA 600[1], 1982	GC/Hall
Nitrate as Nitrogen	EPA 300.0	EPA 600[2], 1984	Ion Chromatography
Chloride	EPA 300.0	EPA 600[2], 1984	IC
Metals	EPA 6010	SW 846, 1986	AA
Chromium, Hexavalent	EPA 7196	SW 846, 1986	Spectrophotometer

[1]Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

[2]Methods for Chemical Analysis of Water and Wastes.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-7-2203, 2204, 2205

ANALYSIS NO.: 826723-001
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	0.04	ND	0.02
Chromium-Hexavalent	(EPA 7196)	ND	ND	0.05
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	ND	ND	0.02
Nitrate as Nitrogen	(EPA 300.0)	5.5	ND	0.2
Chloride	(EPA 300.0)	1,400.	ND	0.1

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-6B-2206, 2207, 2208

ANALYSIS NO.: 826723-002
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	0.05	ND	0.02
Chromium-Hexavalent	(EPA 7196)	ND	ND	0.05
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	ND	ND	0.02
Nitrate as Nitrogen	(EPA 300.0)	8.0	ND	0.2
Chloride	(EPA 300.0)	100.	ND	0.1

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-9-2213, 2214, 2215

ANALYSIS NO.: 826723-003
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	2.75	ND	0.02
Chromium-Hexavalent	(EPA 7196)	1.5	ND	1.25
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	0.03	ND	0.02
Nitrate as Nitrogen	(EPA 300.0)	7.6	ND	0.2
Chloride	(EPA 300.0)	490.	ND	0.1

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-5-2218, 2219, 2220

ANALYSIS NO.: 826723-004
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28-30/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

MISCELLANEOUS PARAMETERS

UNITS: mg/L

PARAMETERS		RESULTS	BLANK	DETECTION LIMIT
Cadmium	(EPA 6010)	ND	ND	0.01
Chromium	(EPA 6010)	0.05	ND	0.02
Chromium-Hexavalent	(EPA 7196)	ND	ND	0.05
Copper	(EPA 6010)	ND	ND	0.02
Zinc	(EPA 6010)	ND	ND	0.02
Nitrate as Nitrogen	(EPA 300.0)	3.6	ND	0.2
Chloride	(EPA 300.0)	93.	ND	0.1

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-9-2211

ANALYSIS NO.: 826723-006
ANALYSES: EPA Method 602
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.007*
Toluene	ND	ND	0.01*
Ethylbenzene	ND	ND	0.01*
Total Xylenes	ND	ND	0.01*

*Higher detection limits due to sample matrix.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-9-2209

ANALYSIS NO.: 826723-005
ANALYSES: EPA Method 601
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.01
Bromomethane	ND	ND	0.01
Vinyl Chloride	ND	ND	0.01
Chloroethane	ND	ND	0.01
Methylene Chloride	0.01	0.01	0.01
Trichlorofluoromethane	ND	ND	0.01
1,1-Dichloroethene	0.03	ND	0.01
1,1-Dichloroethane	0.09	ND	0.01
Trans-1,2-Dichloroethene	ND	ND	0.01
Chloroform	0.01	ND	0.01
1,2-Dichloroethane	ND	ND	0.01
1,1,1-Trichloroethane	ND	ND	0.01
Carbon Tetrachloride	ND	ND	0.01
Bromodichloromethane	ND	ND	0.01
1,2-Dichloropropane	ND	ND	0.01
Trans-1,3-Dichloropropene	ND	ND	0.01
Trichloroethene	0.09	ND	0.01
Dibromochloromethane	ND	ND	0.01
1,1,2-Trichloroethane	ND	ND	0.01
cis-1,3-Dichloropropene	ND	ND	0.01
2-Chloroethyl Vinyl Ether	ND	ND	0.01
Bromoform	ND	ND	0.01
Tetrachloroethene	ND	ND	0.01
1,1,2,2-Tetrachloroethane	ND	ND	0.01
Chlorobenzene	ND	ND	0.01
1,2-Dichlorobenzene	ND	ND	0.01
1,3-Dichlorobenzene	ND	ND	0.01
1,4-Dichlorobenzene	ND	ND	0.01

NOTE: Blank corrected for sample dilution.

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-00-2216

ANALYSIS NO.: 826723-007
ANALYSES: EPA Method 601
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	0.001	0.001	0.001
Trichlorofluoromethane	ND	ND	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: W-00-2217

ANALYSIS NO.: 826723-008
ANALYSES: EPA Method 602
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: Trip Blank

ANALYSIS NO.: 826723-009
ANALYSES: EPA Method 601
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 601 HALOGENATED VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULT	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	0.001
Bromomethane	ND	ND	0.001
Vinyl Chloride	ND	ND	0.001
Chloroethane	ND	ND	0.001
Methylene Chloride	ND	0.001	0.001
Trichlorofluoromethane	ND	ND	0.001
1,1-Dichloroethene	ND	ND	0.001
1,1-Dichloroethane	ND	ND	0.001
Trans-1,2-Dichloroethene	ND	ND	0.001
Chloroform	ND	ND	0.001
1,2-Dichloroethane	ND	ND	0.001
1,1,1-Trichloroethane	ND	ND	0.001
Carbon Tetrachloride	ND	ND	0.001
Bromodichloromethane	ND	ND	0.001
1,2-Dichloropropane	ND	ND	0.001
Trans-1,3-Dichloropropene	ND	ND	0.001
Trichloroethene	ND	ND	0.001
Dibromochloromethane	ND	ND	0.001
1,1,2-Trichloroethane	ND	ND	0.001
cis-1,3-Dichloropropene	ND	ND	0.001
2-Chloroethyl Vinyl Ether	ND	ND	0.001
Bromoform	ND	ND	0.001
Tetrachloroethene	ND	ND	0.001
1,1,2,2-Tetrachloroethane	ND	ND	0.001
Chlorobenzene	ND	ND	0.001
1,2-Dichlorobenzene	ND	ND	0.001
1,3-Dichlorobenzene	ND	ND	0.001
1,4-Dichlorobenzene	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(213) 598-0458 • (714) 898-6370 • (800) LAB-1-CRL
FAX: (714) 891-5917

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

SAMPLE ID.: Trip Blank

ANALYSIS NO.: 826723-009
ANALYSES: EPA Method 602
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
DATE ANALYZED: 09/28/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

EPA METHOD 602 AROMATIC VOLATILE ORGANICS

UNITS: mg/L

COMPOUND	RESULTS	BLANK	DETECTION LIMIT
Benzene	ND	ND	0.0007
Toluene	ND	ND	0.001
Ethylbenzene	ND	ND	0.001
Total Xylenes	ND	ND	0.001

CRL Environmental - South Coast
7440 Lincoln Way ● Garden Grove, CA 92641
(213) 598-0458 ● (714) 898-6370 ● (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco

LABORATORY REPORT

KLEINFELDER
17100 Pioneer Blvd., Suite 350
Artesia, CA 90701
ATTN: Mr. Ken Durand

ANALYSIS NO.: 826723-001/009
ANALYSES: Miscellaneous
DATE SAMPLED: 09/22/88
DATE SAMPLE REC'D: 09/23/88
SAMPLE TYPE: Liquid
PROJECT: 50-1014-3

QA/QC SUMMARY

Date	Parameter(method)	Average Spike Recovery%	Acceptable Range%	Relative Percent Difference	Acceptable Range%
09/28/88	Toluene (EPA 602)	78	60-120	1	40
09/28/88	Ethylbenzene (EPA 602)	80	60-120	6	40
09/28/88	Xylenes (EPA 602)	75	60-120	7	40
09/28/88	1,1-Dichloroethene (EPA 601)	118	60-120	28	40
09/28/88	Trichloroethene (EPA 601)	112	60-120	28	40
09/28/88	Chlorobenzene (EPA 601)	96	60-120	6	40
09/28/88	Chloride (EPA 300.0)	95	88-118	2	13
09/30/88	Nitrate as Nitrogen (EPA 300.0)	100	86-124	0	12
09/30/88	Cadmium (EPA 6010)	101	70-142	1	28
09/30/88	Chromium (EPA 6010)	108	66-149	1	47
09/30/88	Copper (EPA 6010)	99	63-131	1	37
09/30/88	Zinc (EPA 6010)	111	70-140	19	36
09/28/88	Chromium, Hexavalent (EPA 7196)	102	60-130	4	40

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655
FAX: (818) 795-8579

RECEIVED
OCT 21 1988

ANALYTICAL REPORT

LOG NO: P88-09-483

Received: 26 SEP 88
Reported: 21 OCT 88

50-1014-3

Ken Durand
Kleinfelder & Associates
17100 Pioneer Blvd., Suite 350
Artesia, California 90701

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
09-483-1	W-00-2227 through W-00-2229	26 SEP 88
09-483-2	W-10-2237 through W-10-2243	26 SEP 88
09-483-3	W-11-2255 through W-10-2261	26 SEP 88
09-483-4	W-4-2276 through W-4-2282	26 SEP 88
09-483-5	W-00-2246	26 SEP 88

PARAMETER	09-483-1	09-483-2	09-483-3	09-483-4	09-483-5
Hexavalent Chromium, mg/L	---	<0.02	<0.02	160	---
Nitrate Nitrogen					
Nitrate (as NO3), mg/L	---	<0.4	7.3	6.6	---
Nitrate (as N), mg/L	---	<0.1	1.6	1.5	---
Sample Held, Not Analyzed	---	---	---	---	HOLD
Chloride, mg/L	---	200	110	1400	---
Cadmium, mg/L	---	<0.02	<0.02	0.07	---
Chromium, mg/L	0.07	<0.04	<0.04	130	---
Copper, mg/L	0.08	<0.02	<0.02	<0.02	---
Zinc, mg/L	0.12	<0.03	<0.03	<0.03	---
Nitric Acid Digestion, Date	10/01/88	10/01/88	10/01/88	10/01/88	---

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-09-483

Received: 26 SEP 88
Reported: 21 OCT 88

Ken Durand
Kleinfelder & Associates
17100 Pioneer Blvd., Suite 350
Artesia, California 90701

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
09-483-1	W-00-2227 through W-00-2229	26 SEP 88
09-483-2	W-10-2237 through W-10-2243	26 SEP 88
09-483-3	W-11-2255 through W-10-2261	26 SEP 88
09-483-4	W-4-2276 through W-4-2282	26 SEP 88
09-483-5	W-00-2246	26 SEP 88

PARAMETER	09-483-1	09-483-2	09-483-3	09-483-4	09-483-5
Halocarbons (EPA 601)					
Date Analyzed	10/10/88	10/10/88	10/10/88	10/10/88	---
Dilution Factor, Times 1	2	1	1	5	---
1,1,2,2-Tetrachloroethane, ug/L	<2	<1	<1	<5	---
1,1,2-Trichloroethane, ug/L	45	<1	<1	<5	---
1,1-Dichloroethane, ug/L	<2	7	4	110	---
1,1-Dichloroethene, ug/L	43	9	4	67	---
1,2-Dichlorobenzene, ug/L	44	<1	<1	<5	---
1,2-Dichloroethane, ug/L	<2	40	67	77	---
trans-1,2-Dichloroethene, ug/L	47	<1	<1	13	---
1,2-Dichloropropane, ug/L	<2	<1	<1	<5	---
1,3-Dichlorobenzene, ug/L	36	<1	<1	<5	---
1,4-Dichlorobenzene, ug/L	46	<1	<1	<5	---
2-Chloroethylvinylether, ug/L	<2	<1	<1	<5	---
Bromodichloromethane, ug/L	<2	<1	<1	<5	---
Bromomethane, ug/L	<2	<1	<1	<5	---
Bromoform, ug/L	38	<1	<1	<5	---
Chlorobenzene, ug/L	45	<1	<1	<5	---
Carbon Tetrachloride, ug/L	<2	<1	<1	<5	---
Chloroethane, ug/L	<2	<1	<1	<5	---
Chloroform, ug/L	<2	<1	<1	11	---
Chloromethane, ug/L	<2	<1	<1	<5	---
Dibromochloromethane, ug/L	<2	<1	<1	<5	---

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-09-483

Received: 26 SEP 88
Reported: 21 OCT 88

Ken Durand
Kleinfelder & Associates
17100 Pioneer Blvd., Suite 350
Artesia, California 90701

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
09-483-1	W-00-2227 through W-00-2229	26 SEP 88
09-483-2	W-10-2237 through W-10-2243	26 SEP 88
09-483-3	W-11-2255 through W-10-2261	26 SEP 88
09-483-4	W-4-2276 through W-4-2282	26 SEP 88
09-483-5	W-00-2246	26 SEP 88

PARAMETER	09-483-1	09-483-2	09-483-3	09-483-4	09-483-5
Dichlorodifluoromethane, ug/L	<20	<10	<10	<50	---
Methylene chloride, ug/L	<2	<1	<1	45	---
Tetrachloroethene, ug/L	40	<1	<1	<5	---
1,1,1-Trichloroethane, ug/L	43	<1	<1	<5	---
Trichloroethylene, ug/L	40	62	40	260	---
Trichlorofluoromethane, ug/L	<2	<1	<1	<5	---
Vinyl chloride, ug/L	<2	<1	<1	<5	---
cis-1,3-Dichloropropene, ug/L	33	<1	<1	<5	---
trans-1,3-Dichloropropene, ug/L	<2	<1	<1	<5	---

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-09-483

Received: 26 SEP 88
Reported: 21 OCT 88

Ken Durand
Kleinfelder & Associates
17100 Pioneer Blvd., Suite 350
Artesia, California 90701

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
09-483-1	W-00-2227 through W-00-2229	26 SEP 88
09-483-2	W-10-2237 through W-10-2243	26 SEP 88
09-483-3	W-11-2255 through W-10-2261	26 SEP 88
09-483-4	W-4-2276 through W-4-2282	26 SEP 88
09-483-5	W-00-2246	26 SEP 88

PARAMETER	09-483-1	09-483-2	09-483-3	09-483-4	09-483-5
Vol.Aromatics (EPA-602)					
Date Analyzed	10/10/88	10/10/88	10/10/88	10/10/88	---
Dilution Factor, Times 1	2	1	1	5	---
Chlorobenzene, ug/L	45	<1	<1	<5	---
1,2-Dichlorobenzene, ug/L	44	<1	<1	<5	---
1,3-Dichlorobenzene, ug/L	36	<1	<1	<5	---
1,4-Dichlorobenzene, ug/L	46	<1	<1	<5	---
Benzene, ug/L	47	<1	<1	<5	---
Ethylbenzene, ug/L	46	2	130	24	---
Toluene, ug/L	45	<1	<1	35	---
Additional Compounds:					
Total Xylene Isomers, ug/L	120	<10	<10	60	---

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-09-483

Received: 26 SEP 88
Reported: 21 OCT 88

Ken Durand
Kleinfelder & Associates
17100 Pioneer Blvd., Suite 350
Artesia, California 90701

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, WASTEWATER SAMPLES	DATE SAMPLED
09-483-6	W-00-2247	26 SEP 88
09-483-7	W-00-2285	26 SEP 88
09-483-8	W-00-2286	26 SEP 88

PARAMETER	09-483-6	09-483-7	09-483-8
Sample Held, Not Analyzed	HOLD	HOLD	HOLD

Jeffrey A. Erion, Laboratory Manager

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 809261
October 18, 1988

Kleinfelder
17100 Pioneer Blvd.
Artesia, CA 90701

RECEIVED
OCT 19 1988

Attention: Ken Durand

The QA/QC samples which you requested September 22, 1988 were spiked with the following organic compounds.

COMPOUND	QUANTITY (ug/L)
Benzene	49.1
Bis (2-chloroethyl) Ether	50.5
Bromoform	51.0
Chlorobenzene	49.5
m-Dichlorobenzene	50.0
o-Dichlorobenzene	49.5
p-Dichlorobenzene	52.0
1,1-Dichloroethene	50.0
cis 1,2-Dichloroethene	51.0
1,1-Dichloropropene	50.5
Ethylbenzene	50.0
1,1,2,2-Tetrachloroethene	50.0
Trichloroethene	49.5
1,1,1-Trichloroethane	49.5
1,1,2-Trichloroethane	50.5
Toluene	50.0
m-Xylene	49.0
o-Xylene	50.0
p-Xylene	49.5

In addition, the samples were spiked with 0.1 mg/L for each of the metals - chromium, copper and zinc.

If you have any questions please call me at (619) 458-9141.

Sincerely yours,

Mary E. Shigley

Mary. E. Shigley
Client Services Supervisor

MES:pm

Analytical**Technologies,** Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 809261

October 13, 1988

Kleinfelder
17100 Pioneer Blvd., Ste. 350
Artesia, California 90701

Project Name: Check Sample

Attention: Ken Durand

On September 22, 1988, Analytical Technologies, Inc. received a request to analyze one water sample. The sample was analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Marcilen Lindsey
Inorganics Supervisor

Richard M. Amano
Laboratory Manager

ML:bc

AnalyticalTechnologies,Inc.

ATI I.D. 809261

ANALYTICAL SCHEDULE

CLIENT: KLEINFELDER
PROJECT NAME: CHECK SAMPLE

PROJECT NO.: (NONE)

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
CHROMIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
VOLATILE HALOCARBONS	GC/HALL	EPA 601
VOLATILE AROMATICS	GC/PID	EPA 602

Analytical Technologies, Inc.

CLIENT : KLEINFELDER-ARTESIA
PROJECT # : (NONE)
PROJECT NAME : CHECK SAMPLE

DATE RECEIVED : 09/22/88
REPORT DATE : 10/14/88

ATI I.D. : 809261

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	C-26-3	WATER	09/22/88

----- TOTALS -----

MATRIX	# SAMPLES
WATER	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 809261

CLIENT : KLEINFELDER-ARTESIA
PROJECT # : (NONE)
PROJECT NAME : CHECK SAMPLE

DATE RECEIVED : 09/22/88
REPORT DATE : 10/14/88

PARAMETER	UNITS	01
CHROMIUM	MG/L	0.10
COPPER	MG/L	0.09
ZINC	MG/L	0.13

Analytical Technologies, Inc. METALS - QUALITY CONTROL

CLIENT : KLEINFELDER-ARTESIA
PROJECT # : (NONE)
PROJECT NAME : CHECK SAMPLE ATI I.D. : 809261

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHROMIUM	MG/L	80923502	<0.01	<0.01	0	1.7	2.0	85
COPPER	MG/L	80931801	0.05	0.04	22	1.9	2.0	93
ZINC	MG/L	80928410	0.08	0.08	0	1.7	2.0	85

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 80926101

TEST : EPA 601/602 (VOLATILES)

CLIENT	: KLEINFELDER-ARTESIA	DATE SAMPLED	: 09/22/88
PROJECT #	: (NONE)	DATE RECEIVED	: 09/22/88
PROJECT NAME	: CHECK SAMPLE	DATE EXTRACTED	: N/A
CLIENT I.D.	: C-26-3	DATE ANALYZED	: 10/04/88
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
BENZENE	41
BROMODICHLOROMETHANE	<1.0
BROMOFORM	44
BROMOMETHANE	<1.0
CARBON TETRACHLORIDE	<1.0
CHLOROBENZENE	40
CHLOROETHANE	<1.0
CHLOROFORM	<1.0
CHLOROMETHANE	<1.0
DIBROMOCHLOROMETHANE	78
1,2-DICHLOROBENZENE	40
1,3-DICHLOROBENZENE	49
1,4-DICHLOROBENZENE	41
DICHLORODIFLUOROMETHANE	<1.0
1,1-DICHLOROETHANE	<1.0
1,2-DICHLOROETHANE	<1.0
1,1-DICHLOROETHENE	35
TRANS-1,2-DICHLOROETHENE	42
1,2-DICHLOROPROPANE	26
CIS-1,3-DICHLOROPROPENE	<1.0
TRANS-1,3-DICHLOROPROPENE	56
ETHYLBENZENE	38
METHYLENE CHLORIDE	<10
1,1,2,2-TETRACHLOROETHANE	<1.0
TETRACHLOROETHENE	31
TOLUENE	39
1,1,1-TRICHLOROETHANE	39
1,1,2-TRICHLOROETHANE	78
TRICHLOROETHENE	35
TRICHLOROFLUOROMETHANE	<10
VINYL CHLORIDE	<1.0
META XYLENE	38
ORTHO & PARA XYLENE	73

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	76
TRIFLUOROTOLUENE (%)	95

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : EPA 601/602 (VOLATILES)

CLIENT	: KLEINFELDER-ARTESIA	ATI I.D.	: 809261
PROJECT #	: (NONE)	DATE EXTRACTED	: N/A
PROJECT NAME	: CHECK SAMPLE	DATE ANALYZED	: 10/04/88
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.5
BROMODICHLOROMETHANE	<0.2
BROMOFORM	<0.2
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.2
CHLOROBENZENE	<0.5
CHLOROETHANE	<0.2
CHLOROFORM	<0.2
CHLOROMETHANE	<0.2
DIBROMOCHLOROMETHANE	<0.2
1,2-DICHLOROBENZENE	<0.5
1,3-DICHLOROBENZENE	<0.5
1,4-DICHLOROBENZENE	<0.5
DICHLORODIFLUOROMETHANE	<0.2
1,1-DICHLOROETHANE	<0.2
1,2-DICHLOROETHANE	<0.2
1,1-DICHLOROETHENE	<0.2
TRANS-1,2-DICHLOROETHENE	<0.2
1,2-DICHLOROPROPANE	<0.2
CIS-1,3-DICHLOROPROPENE	<0.2
TRANS-1,3-DICHLOROPROPENE	<0.2
ETHYLBENZENE	<0.5
METHYLENE CHLORIDE	<2.0
1,1,2,2-TETRACHLOROETHANE	<0.2
TETRACHLOROETHENE	<0.2
TOLUENE	<0.5
1,1,1-TRICHLOROETHANE	<0.2
1,1,2-TRICHLOROETHANE	<0.2
TRICHLOROETHENE	<0.2
TRICHLOROFLUOROMETHANE	<2.0
VINYL CHLORIDE	<0.2
META XYLENE	<0.5
ORTHO & PARA XYLENE	<0.5

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	74
TRIFLUOROTOLUENE (%)	108

APPENDIX B

CHAIN-OF-CUSTODY RECORDS

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Zil J. Bal

Phone: 860-5555-9

SHIP TO:

C R L
7440 LINCOLN
GARDEN GROVE

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER

Address 17100 PIONEER ARTESIA

Date Shipped 9-26-88

Shipment Service CRL

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Zil J. Bal		9/26 3:45P
		9/26/88 4:20 p.
	Receive for laboratory by*: *(Signature)*	9/26/88 4:20P

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to KLEINFELDER, 17100 Pioneer Blvd., Suite 350, Artesia, CA 90701

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-4-2274	50-1014-03	9-26-88	CrG, Cl	
W-4-2275	↓	↓	N+NO3	
W00-2283			601/602	
W-00-2284			duplicate	
TRIP BLANK			HOLD	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4) RESULTS TO DURAND

(5) COPIES TO S. CAL. CHEM

White - Kleinfelder Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* K. J. DL

Phone: 860-5559

SHIP TO:

C R L
7440 LINCOLN
GARDEN GROVE

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER

Address 17100 PIONEER, ARTESIA

Date Shipped 9-23-88

Shipment Service C RL

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
K. J. DL		9/23 5:1
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time
		9/23 6:00

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-9A-2221	50-1014-3	9-23-88	Cd, Cr, Cu, Zn	
W-9A-2222			Cr-6, Cl	
W-9A-2223			$N+NO_3$	
W-00-2224			601/602	preserved w/HCl
W-00-2225			duplicate	4
W-00-2226			Cr, Cu, Zn	
TRIP BLANK			hold	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) RESULTS TO K. DUEÑAS
(5)

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Z. L. J. Bk

Phone: 960-5559

SHIP TO:
CRL
7440 Lincoln
Garden Grove

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER
Address 17100 PIONEER ARTESIA
Date Shipped 9/21/88
Shipment Service CRL
Airbill No.
Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Z. L. J. Bk		9/21 5:35
		9/21/88 6:10
	Receive for laboratory by*: *(Signature)*	9/21/88 6:10

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-00-2184	SD-1014-3	9/21/88	~~Cl, 2nd Cr~~ EPA 601	
W-00-2195	↓	↓	~~Cr6, Cl~~ EPA 602	
W-1-2186			~~TDS~~ Cd, Cu, Cr, Zn	
W-1-2187			Cr6, Cl	
W-1-2188			N & NO_3	
W-2-2189			Cd, Cu, Cr, Zn	
W-2-2190			Cr6, Cl	
W-2-2191			N & NO_3	
W-8-2192			601	
W-8-2193			duplicate	
W-8-2194			602	
W-8-2195			duplicate	
W-8-2196			Cd, Cu, Cr, Zn	
W-8-2197	↓	↓	Cr6, Cl	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) Results to K. DURAN
(5) Send Invoice To So Calif. Chemical

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* ZL J BL

Phone: 960-5559

SHIP TO:

C R L
7440 LINCOLN
GARDEN GROVE

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER

Address ARTESIA

Date Shipped 9/21/88

Shipment Service CRL

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
ZL J BL		9/21 5:35
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time
		9/21/88 6:1

*Analysis laboratory should complete, "sample condition upon receipt" section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-9-2198	SD-1014-3	9-21-88	NH_4NO_3	
W-00-2199			EPA 601	
W-00-2200			D.F	
W-00-2201			EPA 602	
W-00-2202			Dup	
TRIP BLANK				

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) RESULTS TO K. DURAND
(5)

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* K. J. D.

Phone: 860-5559

SHIP TO:

C R L

7440 LINCOLN

GARDEN GROVE

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER

Address ARTESIA

Date Shipped 9-23-88

Shipment Service CRL

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
K. J. D.		9/23 10:15A
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)* Ryan Yonagar	Date/Time 9/23 4:00P

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to KLEINFELDER, 17100 Pioneer Blvd., Suite 350, Artesia, CA 90701

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-7-2203	50-1014-3	9-22-88	Cd, Cr, Cu, Zn	
W-7-2204			Cr6, Cl	
W-7-2205			N+NO3	
W-6B-2206			Cd, Cr, Cu, Zn	
W-6B-2207			Cr6, Cl	
W-6B-2208			N+NO3	
W-9-2209			601	
W-9-2210			duplicate	
W-9-2211			602	
W-9-2212			dupl.	
W-9-2213			Cd, Cr, Cu, Zn	
W-9-2214			Cr6, Cl	
W-9-2215	↓	↓	N+NO3	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4) RESULTS TO K. DURAN

(5) Send invoice to S.W. Calif. Chem.

White - Kleinfelder Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Z. J. Bl

Phone: 860-5559

SHIP TO:
C R L
7440 LINCOLN
GARDEN GROVE

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER
Address ARTESIA
Date Shipped 9-23-88
Shipment Service CRL
Airbill No.
Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Z. J. Bl		9/23 10:15A
	Receive for laboratory by*: *(Signature)* Ryan Monaghan	9/23 4:00PM

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to KLEINFELDER, 17100 Pioneer Blvd., Suite 350, Artesia, CA 90701

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-00-2216	50-1014-3	9-22-88	601	
W-00-2217	↓	↓	602	
W-5-2218			Cd, Cr, Cu, Zn	
W-5-2219			Cr6, Cl	
W-5-2220			N + NO_3	
				DS not to be analyzed.
	Trip Blanks received on chain of custody			

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) Results to K. Durand
(5)

White - Kleinfelder Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Z. J. BL

Phone: 860-5559

SHIP TO:

C R L

7440 LINCOLN

GARDEN GROVE

ATTENTION: SUSAN

Phone No.

SHIPPING INFORMATION

Shipper KLEINFELDER

Address 17100 PIONEER ARTESIA

Date Shipped 9-26-88

Shipment Service C R L

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Z. J. BL		9/26 3:45 P
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
		9/26/88 4:20 p
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time
		9/26/88 4:20 p

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to KLEINFELDER, 17100 Pioneer Blvd., Suite 350, Artesia, CA 90701

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-10-2230	50-1014-3	9-26-88	601	
W-10-2231			duplicate	
W-10-2232			602	
W-10-2233			dupl.	
W-10-2234			Cr, Cd, Cu, Zn	
W-10-2235			Cr6, Cl	
W-10-2236			$N+NO_3$	
W-00-2244			601/602	
W-00-2245			duplicate	
W-11-2248			601	
W-11-2249			duplicate	
W-11-2250			602	
W-11-2251			dup	
W-11-2252			Cr, Cd, Cu, Zn	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4) RESULTS TO KEN DURAND

(5) INVOICE TO SOUTHERN CALIF. CHEMICAL

White - Kleinfelder Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* [signature]

Phone: 860-5559

SHIP TO:
C R L
7440 Lincoln
Garden Grove

ATTENTION: Susan

Phone No.

SHIPPING INFORMATION

Shipper: KLEINFELDER

Address: 17100 Pioneer Artesia

Date Shipped: 9-26-88

Shipment Service: C R L

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
[signature]	[signature]	9/26 3:45
[signature]		9/26/88 4:20 p
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)* [signature]	9/26/88 4:20 p

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to KLEINFELDER, 17100 Pioneer Blvd., Suite 350, Artesia, CA 90701

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-11-2253	50-1014-3	9-26-88	Cr6, Cl	
W-11-2254	↓	↓	N + NO3	
W-3-2262			601	
W-3-2263			dup.	
W-3-2264			602	
W-3-2265			dup.	
W-3-2266			Cr, Cd, Cu, Zn	
W-3-2267			Cr6, Cl	
W-3-2268			N + NO3	
W-4-2269			601	
W-4-2270			dup.	
W-4-2271			602	
W-4-2272			dup.	
W-4-2273			Cr, Cd, Cu, Zn	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) RESULTS TO KEN DURAND
(5) INVOICE TO SO. CAL. CHEM.

White - Kleinfelder   Canary - Laboratory Courtesy Copy   Pink - Sampler